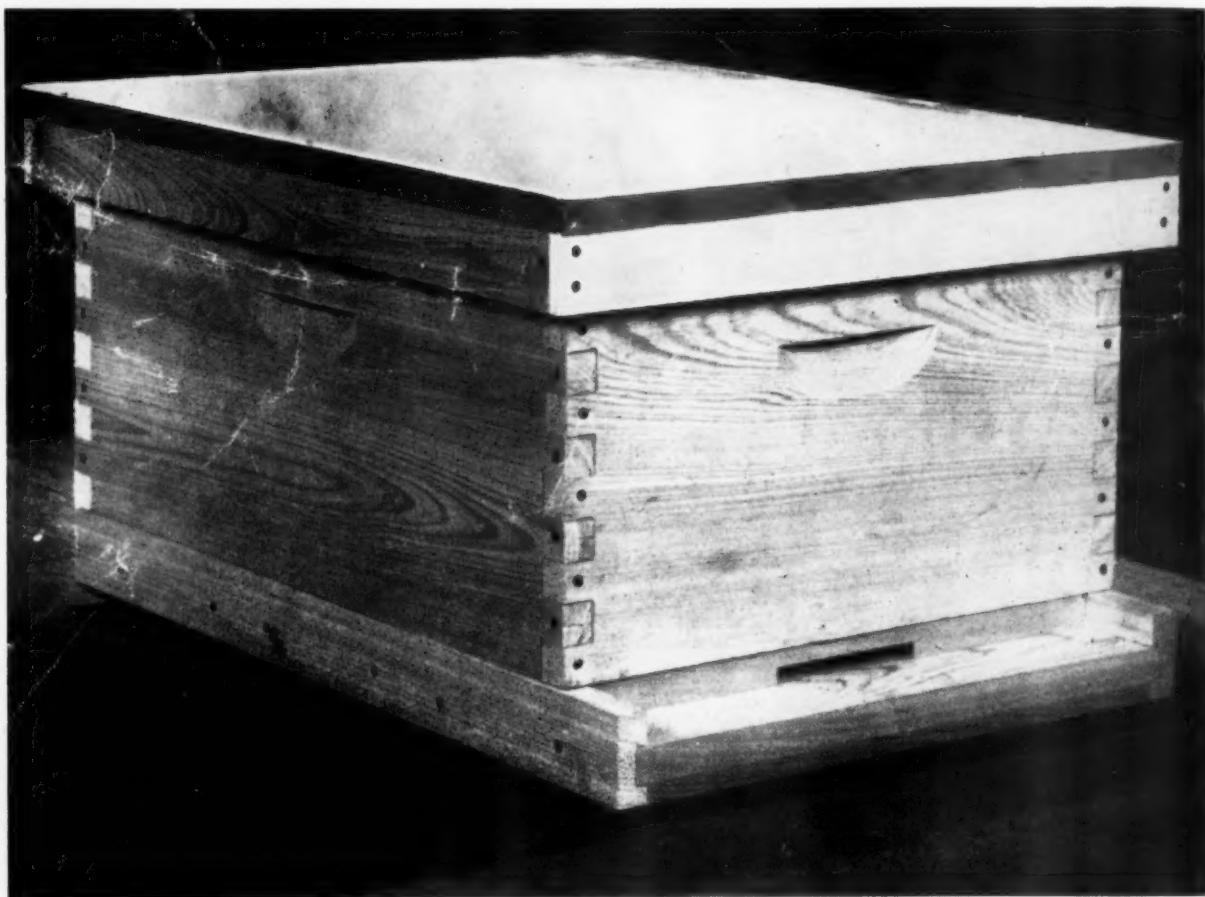


Bees and Apples Go Together—Florence Tomlinson

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**APRIL  
1948**

# AMERICAN BEE JOURNAL



# **BABCOCK'S**

New *Durabilt* Equipment

- ★ CYPRESS, the wood everlasting
- ★ ALUMINUM, the lifetime metal
- ★ WORKMANSHIP unsurpassed

## **BABCOCK HONEY CO.**

803 Sumter Street : Columbia, S. C.

**Sold out of Nuclei and Package Bees For 1948**

# QUEENS

Beginning May 1st we will have available young laying Italian queens. These queens, which are raised in our own queen yards by our own expert breeders, are raised from select stock which has been tested in all parts of the country and has given complete satisfaction to both commercial beekeepers and beginners.

Our many years' experience as commercial honey producers have taught us the value of having a strain of bees which is prolific, hardy and reasonably gentle. We guarantee all queens to be purely mated and to give satisfaction in every respect. Live delivery and certificate of health are assured for every shipment. All queens are shipped postpaid.

<b>Prices: 1-24</b>	<b>\$1.25 each</b>
<b>25 and up</b>	<b>1.10 each</b>

## DURABLE EQUIPMENT

Immediate shipment from large warehouse stock

METAL COVERS, telescoping on all four sides, complete with nails and pure aluminum covering, 5 for	<b>\$7.45</b>
BOTTOM BOARDS, standard reversible type, made from 100 per cent pure cypress, 5 for . . . . .	<b>5.45</b>
HIVE BODIES, empty, complete with frame rests and hand holds on four sides, 5 for . . . . .	<b>6.95</b>
Hive Bodies, complete with Lewis standard brood frames, 5 for . . . . .	<b>12.50</b>
Shallow Extracting Supers, complete with wedge top bar frames, divided or solid bottom bars, 5 for . . . . .	<b>9.25</b>
STANDARD TEN FRAME HIVES, complete with telescoping metal covers, hive bodies, bottom boards, and Lewis divided bottom bar frames. No inner covers. . . . . Five for	<b>25.40</b>

All equipment is furnished in ten frame size unless otherwise specified

WRITE FOR FREE 1948 CATALOGUE

**BABCOCK HONEY COMPANY**

803 Sumter Street : Columbia, S. C.



1896-1948

## NOW IS THE TIME

We are now in position to accept additional orders for supplies for spring delivery. We have on hand a good supply of Western Pine lumber and we are now processing this lumber into hive bodies, frames, etc. Also have a few honey sections and section supers available. Our 1948 price list is off the press and we will be pleased to mail one upon request. A post card will bring this list to you by return mail if you have not already received one.

**MARSHFIELD MFG. CO. (Inc.)**  
MARSHFIELD, WISCONSIN  
(The Heart of America's Dairyland)

## Calling All Beekeepers! Calling All Beekeepers!

WE ARE OFFERING YOU

## Italian Package Bees

that have been giving satisfaction all over the U. S. and Canada. If you have been our customer you know; if not, now is the time to try for yourself.

Packages are prepared overweight with young queens and bees of producing strains bred for increased production.

### 1948 PRICES

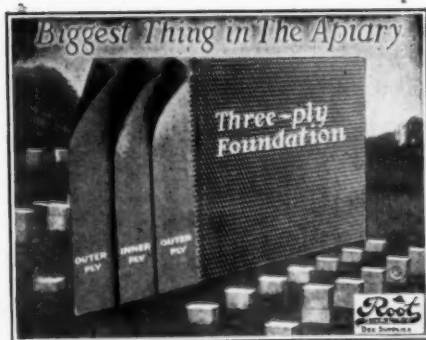
2-lb. with queen ..... \$4.00  
3-lb. with queen ..... 5.00

10% deposit with order balance ten days before shipping date.

*"Satisfaction Guaranteed"*

## Rossman & Long

P. O. BOX 133  
MOULTRIE, GA.



## WITHSTANDS HOT WEATHER

NON-SAGGING      NONSTRETCHING

Stretched cells reduce the brood area of combs

Drones eat up your profits

Stop this loss. For efficient, profitable combs use THREE-PLY

Order now. No advance in prices

**THE A. I. ROOT CO. OF IOWA**  
COUNCIL BLUFFS, IOWA

## Lotz Sections

*"The Best Money Can Buy"*

GET YOUR ORDER IN EARLY for our high grade sections—made of smooth, clear basswood lumber. The dimensions are accurate, and the workmanship of the best. A high glossy polish, smooth dovetails, and oval V-grooves are additional features of our sections. Furnished in the Mill Run Grade, split or unsplit in either Plain or Beeway styles.

ALSO

A Complete Line of  
**Foundation**  
**Woodenware**  
**Accessories**

## AUGUST LOTZ COMPANY

MANUFACTURERS AND JOBBERS  
OF BEE SUPPLIES

WRITE FOR PRICES

**BOYD, WISCONSIN**



# Leather Italian Queens and Package Bees

**FROM EVANGELINE : OPEN DATES IN APRIL**

For good results place your requirements with us now. We invite both small and large orders from our old and new customers. Our bees are in the best of condition—orders will be shipped as booked. *OUR QUEENS ARE GUARANTEED TO GIVE SATISFACTION.*

PRICES FROM LATTER MARCH (Weather Permitting) TO JUNE 1ST, 1948

	1-24	25-99	100-up
2-lb. package with queen	\$4.50	\$4.25	\$4.00
3-lb. package with queen	5.85	5.55	5.25
4-lb. package with queen	7.20	6.85	6.50
5-lb. package with queen	8.55	8.15	7.75
Queens (postpaid)	1.40	1.30	1.20

Queens' wings clipped if requested—no extra charges.

Package bees shipped express COLLECT unless otherwise specified. Small 10% deposit will hold order—balance payable shortly before shipment.

**Evangeline Bee Co. : Breaux Bridge, La. : Phone 269W : Steven Dupuis**



KELLEY—"THE BEE MAN"

## BEES & QUEENS

**MANY OPEN DATES IN MAY. 3-BANDED ITALIANS ONLY**

	1-9	10-99
2-lb. Swarms with Queen	\$4.50	\$4.25
3-lb. Swarms with Queens	5.75	5.50
Young laying Queens	\$1.25 each.	100 and up, \$1.00

**THE WALTER T. KELLEY CO.**

**PADUCAH, KY.**

## New Improved Master Mix Pollen For 1948

We have 240 colonies with electric heaters. Drones are hard to rear out of season, but we have done it time and again. We had an extra strong colony that we were running for fine drones, feeding it heavy on syrup and keeping the temperature up to 80 they have taken 2 pounds of Master Mix in November 1947. Heat does no good for brood rearing unless you have pollen and feed.

Customers write like this: The Master Mix I bought did very well at my apiaries, 35 miles South of New York. From Michigan. I used it last year and had good results. From Kansas, February 1947, wrote, I used it last year and had splendid results, ship 6 more pails at once. From Illinois, I started feeding Master Mix in 1946 and it is marvelous how they respond, especially the weaker colonies, 1946 was a poor year and I was the only person among several who received a good surplus, I credit that fact to Master Mix Pollen. The bees received from you did well.

1 No. 10 lb. pail, Net weight 8½ lbs. Price \$2.50—6 for \$13.50

1 No 60 Can, Net weight 53 lbs. Price \$12.00. FREE CIRCULARS.

We breed three kinds of queens. ITALIANS, CAUCASIANS mated to Italian drones and daughters of queens bred for resistance. Over 30 years a shipper all over U. S. A. and Canada.

2-lb. package bees with queen	\$5.00
3-lb. package bees with queen	6.25
4-lb. package bees with queen	7.50

Extra queens, \$1.50 each.  
Discount on large lots.  
10% down books your order.

**Blue Bonnet Apiaries : Rt. 2, Box 23, Weslaco, Texas**

*An Ad in the A-B-J Brings Satisfactory Results. Try it*

**KOEHNEN'S**  
**Package Bees and Queens**  
 For Quality and Service  
**KOEHNEN'S APIARIES**  
 GLENN, CALIFORNIA

**Southern Beekeeper**  
 (Magazine)  
 HAPEVILLE, GA.  
 "Southern in scope—  
 National in influence"

**QUEENS**  
**3-BAND ITALIANS**  
**\$1.20**

**LARGE**

**VIGOROUS**

**THAT PLEASE**

Address until April 1st, University of Alabama, University, Alabama. After April 1st, Samson, Alabama.

**Miss Lenora Anderson**

**Italian Package Bees & Queens**  
 AT PREVAILING PRICES  
 Quality Service and Satisfaction  
**BENNETT BEE FARMS**  
 1504 N. Main St. Hattiesburg, Miss.

**AMERICAN RABBIT JOURNAL**  
 Shows the Way to Success . .

Gives the latest news and views of the rabbit world—an illustrated monthly magazine of general and educational features. One year \$1.00; three years, \$2.00; sample 15c.

**AMERICAN RABBIT JOURNAL**  
 Dept. S. Warrenton, Missouri

**QUEENS**  
 LEATHER COLORED ITALIAN—For delivery after May 10th only.  
 \$1.25 each, any number.  
**Gold Flat Apiaries**  
 NEVADA CITY, CALIFORNIA



April, 1948

Volume 88, No. 4

## American Bee Journal

HAMILTON, ILLINOIS

Managing Editor—G. H. Cale

Associate Editors—M. G. Dadant, Frank C. Pellett, Roy A. Grout

Published monthly at Hamilton, Illinois. Entered as second class matter at the Postoffice Hamilton, Illinois. In United States, Canada and Mexico, \$2.00 a year; two years \$3.00; three years, \$4.00. Foreign \$2.25 a year; two years \$3.50; three years \$4.75; Subscription stopped at expiration printed on wrapper.

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### 3-Banded Italian Package Bees & Queens

Live delivery, full weight, prompt shipment and a health certificate guaranteed

Prices as listed below:

Lots of	Queens	2-lb.	3-lb.	4-lb.	5-lb.
1-24 .....	\$1.40	\$4.50	\$5.85	\$7.20	\$8.55
25-99 .....	1.30	4.25	5.55	6.85	8.15
100 up .....	1.20	4.00	5.25	6.50	7.75

Booked up until May 5th for package bees. Open dates for queen orders after April 15th.

**FARRIS HOMAN : Shannon, Mississippi**



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## ITALIAN BEES & QUEENS

1948 PRICES

Queens	\$1.20 each
2-lb. with queen	\$4.00
3-lb. with queen	5.00

10% percent deposit with order, balance ten days before shipment. All orders acknowledged at once. Notice mailed same day of shipment. Health certificate with every shipment. Satisfaction guaranteed.

**G. D. McCary & Son Bee Co.**  
BUCATUNNA, MISSISSIPPI



**Soy Flour  
Pollen Traps  
Brewers'  
Yeast**



Also our famous K & S PRE-MIX  
POLLEN SUPPLEMENT

We are distributors of Staley's Low-fat High Protein Expeller Processed Soy Flour for beekeepers. Write for prices.

**Killion & Sons' Apiaries**  
PARIS, ILL.

## Three-Banded Italian Bees

Packages with Queens

	1-9	10-49	50-99	100-over
2-lb. pkg.	\$4.40	\$4.20	\$4.10	\$4.00
3-lb. pkg.	5.40	5.20	5.10	5.00

Extra Queens \$1.25 each

**J. P. CORONA**

BOX 124

KENNER, LOUISIANA

## NORTHERN QUEENS

A hardy improved strain of Italians.  
PRICES JUNE 1 TO NOVEMBER 1  
Untested \$1.25 Tested \$2.00  
Air mail postpaid. 20% will confirm order. Prompt Service. Satisfaction.

**BARGER APIARIES, Carey, Ohio**

## Canadian Bee Journal

Canadian beekeepers have much in common with their neighbors in the U. S. If you are interested in bee activities "North of the Border," send us your subscription NOW. Subscription price, \$1.25 per year in U. S. A.

## CANADIAN BEE JOURNAL

54 Bloor St. West, Toronto 5, Ontario

## ATTENTION!

Don't wait! Book your orders now for our Three-Banded Italian Queens and Bees. Prices: 2-lb. pkg. \$4.50; 3-lb. pkg. \$5.75. Queens \$1.50. 25% to book order, balance 10 days before shipment.

## GOLDEN RIDGE APIARIES

P. O. Box 1225, Oroville, California

## BEE SUPPLIES

We have a fair stock of supplies and will try our best to take care of all orders. Write for our 1948 price list.

**A. H. Rusch & Son Co.**  
REEDSVILLE, WISCONSIN

**A-B-J Ads Are Result Getters**

You read the A-B-J Ads—  
so do plenty of others





Above photo shows a portion of one of our queen yards containing over 10,000 nuclei.

## ITALIAN BEES <sup>A</sup><sub>N</sub><sup>D</sup> YOUNG QUEENS

Get your package bees and queens when you want them. We have open dates for April and May and can most likely serve you on dates desired.

### PRICES

	1 to 9	10 to 49	50 to 99	100 & above
2-lb. pkg. with queen (each)---	\$4.50	\$4.25	\$4.15	\$4.00
3-lb. pkg. with queen (each)---	5.65	5.40	5.30	5.15
4-lb. pkg. with queen (each)---	6.80	6.55	6.45	6.30
Queens (each)	\$1.35. Tested \$2.00			

LARGE QUEEN ORDERS SOLICITED

**OVERBEY APIARIES : Bunkie, La.**

## Highest Prime Quality 3-Banded Italian Improved Strain Package Bees & Queens

Backed by over 25 years careful selecting, breeding and shipping to all points in U. S. A. and Canada with 100% perfect satisfaction guaranteed to every one, in every respect.

You get each season's improvements when buying from us, what we mean, each season we select the best for honey producing qualities, disease resistance qualities from many hundreds of best by test colonies. Our breeding and mating stock is carefully picked and tested out for the coming season for your benefit, sparing neither labor nor money in producing the best with patience and long experience which we feel are surpassed by none. Mating is very important in breeding the best strain of bees, we carefully select our drone colonies for mating in quality same as breeders.

Book your orders now to reserve your specified shipping date. No customer will be disappointed when booking their orders with us. Your bees are guaranteed on time, our prices for 1948 are as follows—one-fourth down payment with order, balance due 10-days before your specified shipping date.

	Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20	\$8.55
25-99	1.30	4.25	5.55	6.85	8.15
100-up	1.20	4.00	5.25	6.50	7.75

We guarantee full weight packages, young vigorous bees with their working life ahead, no supersedure in our queens, health certificate with each shipment, 100% perfect satisfaction guaranteed in every respect. For "HIGHEST PRIME QUALITY," PROMPT SHIPMENT we feel free to say we are surpassed by none. Book your orders now for your requirement if possible. We are working each day now to fulfill your requirements for 1948. Placing orders in advance enables us to know what shipments must go out each day in shipping season. THANK YOU.

**H. A. FARMER APIARIES : Cottonwood, Ala.**

TELEGRAPH AND EXPRESS OFFICE DOTHAN, ALABAMA

PHONE 2582

OUR GENTLE NORTHERN-BRED

### Caucasian Queens

are satisfying customers from coast to coast. A postcard brings our circular, with prices on untested, tested and breeder queens.

ROSEVIEW GARDENS & APIARIES  
HAWKESTONE, ONTARIO

## ITALIAN PACKAGE BEES AND QUEENS

On the same old basis—QUALITY, SERVICE, SATISFACTION—QUEENS after May 20th \$1.

2-lb bees with queen 1-24, \$4.00; 25 up, \$3.85. 3-lb. bees with queen 1-24, \$5.00; 25 up,

\$4.90. 4-lb. bees with queen 1-24, \$6.15; 25 up \$6.00.

E. J. BORDELON APIARIES : Box 33 : Moreauville, La.

## BETTER BRED QUEENS

## 3-BANDED ITALIANS

Tried and Proven—Better Bred Queens and Bees. Just ask your neighbors about our stock, service and friendly dealings. Am sure there is one near you who has tried them and has been buying for a number of years, as we have many satisfied customers in practically all the states and throughout Canada. The season looks very promising for plenty early bees which will insure a great quantity of bees throughout the shipping season. Order from this ad and be among our many satisfied customers.

	Queens	2-lb.	3-lb.	4-lb.
1 to 24	\$1.40	\$4.50	\$5.85	\$7.20
25 to 99	1.30	4.25	5.55	6.85
100 up	1.20	4.00	5.25	6.50

## Calvert Apiaries

## Calvert, Alabama

## GARON'S QUEENS

FROM NORTHERN BRED A. F. B.  
DISEASE RESISTANT STOCK

These queens are bred from the finest available Disease Resistant Stock and are bred for Heavy Honey Production, Moderate Temper and other desirable characteristics.

PRICES—1-9 at \$1.65; 10-24 at \$1.55; 25-99 at \$1.50; 100-up at \$1.45.

Our D. R. Queens may be had with packages shown in our ad on page 212 of this magazine. Health Certificates on all shipments.

GARON BEE COMPANY : Donaldsonville, La.

## BEES for April ► *Caucasian and Italian Cross*

We still have dates in April and early May on which we can book several thousand packages of bees. We can load trucks and can use your packages. Write for prices on truckload lots.

For gentle, high-producing bees try our Italian-Caucasian strain that have proven themselves in honey production. All packages headed by young queens bred from carefully selected stock tested in our northern honey producing yards and all queens are REARED IN STANDARD THREE-FRAME NUCLEI, assuring you of a queen that will produce a crop. SATISFACTION GUARANTEED.

5,000 3-lb. pkgs. at the following prices: 3-lb. pkg. with queen (each) 1-9, \$5.65; 10-49, \$5.40; 50-99, \$5.30; 100-up, \$5.15. 20% to book order—Balance 10 days prior shipment.

## INNANEN APIARIES

Member Sioux Honey Association

NORTHERN BRANCH  
SIOUX RAPIDS, IOWA

SOUTHERN BRANCH AND SHIPPING POINT  
VICKSBURG, MISSISSIPPI

1948

## GOOCH'S ITALIAN QUEENS THAT PRODUCE

1948

5,000 packages and 15,000 queens will be ready for shipment to YOU in the early spring. Bright Yellow and Three-Banded Italians, EACH QUEEN THE DAUGHTER OF A QUEEN THAT PRODUCED 300 LBS. OR MORE OF SURPLUS HONEY IN ONE SEASON, AND MATED TO DRONES OF EQUAL QUALITY.

PRICES	1 to 10	11 to 50	51 to 100
Queens, each	\$1.40	\$1.30	\$1.15
2-lb. package with queen	4.50	4.20	4.10
3-lb. package with queen	5.60	5.30	5.20

Full weight packages, young laying queens and live delivery guaranteed. PROFITABLE BEEKEEPING BEGINS WITH GOOCH'S QUEENS.

JESSE E. GOOCH & SONS : Rt. 3, Pine Bluff, Arkansas

## 1948 Package Bees & Queens

PRICES:	Queens	2-lb. with queen	3-lb. with queen
1 to 49	\$1.35	\$4.50	\$5.75
50 to 99	1.25	4.25	5.50
100 up	1.00	4.00	5.00

Above prices will hold unless cost of sugar is materially increased.

**HOMAN BROS. : Rt. 2 : Shannon, Miss.**



**HAZEL-ATLAS**  
**GLASS CO.**  
WHEELING, W. VA.

## ITALIAN QUEENS and PACKAGE BEES

We are now booking orders for 1948 delivery. 20% with order, balance 10 days before shipping date. We guarantee live delivery and health certificate with each shipment. Prices: 2-lb. package \$4.00; 3-lb. package \$4.75.

**N. GAUTHIER BEE CO., Hessmer, Louisiana**

HIGH QUALITY, THREE-BANDED

## Italian Bees and Queens

Quantity	1-49	50-99	100-up
2-lbs. with queen	\$4.25	\$4.15	\$4.00
3-lbs. with queen	5.40	5.30	5.15
4-lbs. with queen	6.55	6.45	6.30
5-lbs. with queen	7.80	7.70	7.65
Extra queens	1.40	1.30	1.20

IT PAYS to buy High Quality Queens and Bees! I still have some open shipping dates for April and lots for May. I can make prompt shipment on extra queens. Try 'em you'll like 'em.

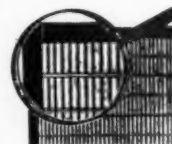
**CARLUS T. HARPER**

R. NO. 1, NEW BROCKTON, ALA.

THE ONLY WORTHWHILE

## QUEEN EXCLUDER

on the market



Chrysler's All Steel Electric Welded Queen Excluder allows maximum bee passage, better ventilation, more honey production. No wood, no sharp edges to injure bees, no burr combs. New rust proofing process. So durably made and accurately spaced that it is permanently Queen excluding and will last a lifetime. Sales increasing steadily each year. For earliest delivery place your order at once. Send for circular E-3.

**W. A. Chrysler & Son**  
Chatham - Ontario - Canada

## CAUCASIAN

PACKAGE BEES AND QUEENS  
FOR 1948

**LOHMAN BEE CO.**

RT. 1, BOX 340 C, LOOMIS, CALIF.

**BAKER'S BEE BREAD** This is the best POLLEN SUBSTITUTE on the market today for forcing Queen Laying and Brood Rearing. The best insurance you can buy for a big Honey Crop and building up Package Bees. Ready to feed, no fuss, no muss. Order Now. 1, No. 10-lb. pail \$35.00. 6 for \$19.00, F. O. B. Glencoe.

**BAKER'S APIARIES**

GLENCOE, ILLINOIS

HIGH GRADE

## Italian Queens & Package Bees WITH QUEEN

	25-49	50-up
2-lb. pkgs. with queen	\$4.00	\$3.90
3-lb. pkgs. with queen	5.00	4.90
Queens	\$1.25	1.10

Guaranteed full weight and prompt shipment.

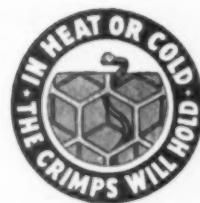
**E. J. COCO**

Hamburg, Louisiana, Box 38

**A-B-J Ads Get Results**



# Dadant's Beecomb

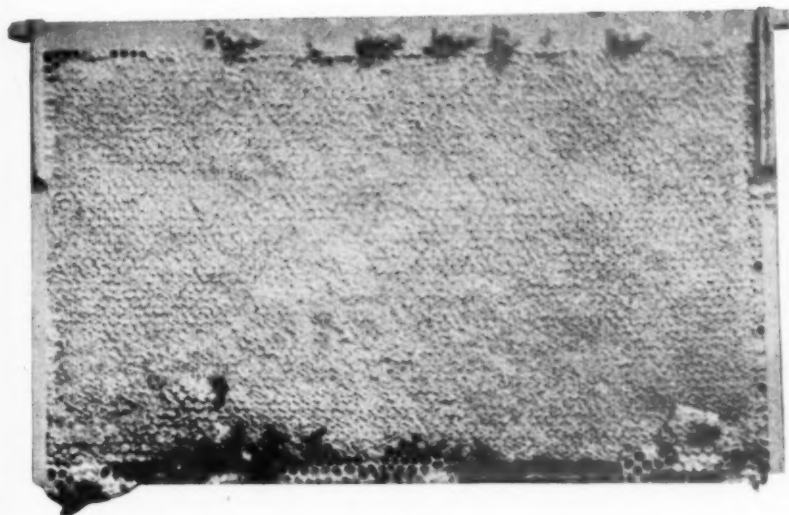


## Combs That Do So Much ... And Cost So Little

When you use DADANT'S CRIMP-WIRED FOUNDATION you get combs that, with good care, will last almost as long as your equipment.

## Foundation

*When you want QUALITY comb honey, remember Dadant's Superlative Surplus, the finest made . . . And Dadant's Plain (unwired) Foundation for those who need it.*



Combs built from Dadant's Crimp-wired Foundation are a long term investment. They will last for years of crops and many colony buildups. Each sheet of this sturdy foundation starts to save you money the moment you put it in the hive and it goes on saving steadily, year after year.

Too, you get full worker combs. The best queens can't get bees from poor combs. But, put good queens and good combs together and watch the bees pour out. The strong colonies you get will bring in the greatest possible amount of honey.

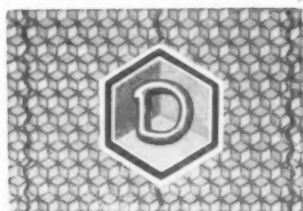
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Be sure to get our 1948 bee supply catalog. Have your name put on our mailing list now

---

## DADANT & SONS

Makers of Famous Foundations



## Hamilton, Illinois

Crimp-Wired — Plain — Surplus

# STOVER'S

## A BEE TO BE PROUD OF

**F**ORTY years ago (1908), a carload of bees was brought from Strasburg, Virginia, to Mayhew, Mississippi. This new outfit was called The Stover Apiaries, a name which we have been proud of all these years. ¶ We have grown up with the package bee business, always trying to improve both the quality of our bees and our service to you—for on your success depends our future existence. ¶ Wherever you are and whenever you need bees or queens, try Stover's. You won't regret it.

ITALIAN	Prices to May 20th				CAUCASIAN
	QUEENS	PACKAGES			
		2-Lb.	3-Lb.	4-Lb.	5-Lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20	\$8.55
25-99	1.30	4.25	5.55	6.85	8.15
100 up	1.20	4.00	5.25	6.50	7.75

Queens postpaid, clipped or airmailed, at no extra cost

**THE STOVER APIARIES**  
MAYHEW, MISSISSIPPI

# Feed Bees Pig Iron?

Down in the deep South of the United States of North America, where the production of package bees and extra queens is concentrated, there is a known soil deficiency of several minerals. . . . Salt is typical. Dairy feed with 1% "mineral mix" content is commonplace with progressive dairymen. The factual results are miraculous.

In our effort to produce better bees, we are committed to a policy of continued research. Our No. 1 project is to ascertain if (and to what extent) the quality and productivity of our bees can be increased by the supplemental feeding of these chemicals lacking in our soil. . . . To finance various research projects, we are setting aside (as an expense to be borne by us) fifty cents from the sale of each package of bees.

We as yet can fill additional orders up to 4000 pounds of bees and 2500 extra 3-band Italian queens. Two pound package, with queen, \$4.25; and three pound package, with queen, \$5.50. Queens \$1.25; tested queens \$2.00. At this late date payment in full with order is necessary for prompt service. If we cannot ship within five days of requested date, your money will be cheerfully refunded. Live delivery of package bees by collect express is, of course, guaranteed. Queens air-mailed and clipped, if requested.

Financial reference: American National Bank & Trust Company, Mobile, Alabama. Ethical reference: Mr. Eugene Cutts, President Alabama Beekeepers Association.

**Southern Apiaries & Supplies Co.**  
**Chatom, Alabama**



# RICH'S

## Leather Italian Package Bees and Queens

We guarantee every queen that is shipped to be mated and of proven laying ability, also that there is no gentler or higher producing stock available.

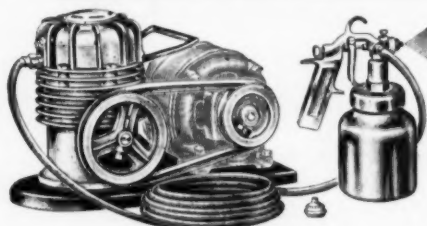
PRICES: From April 1st to June 1st.

	Queens	2-lbs	3-lbs.	4-lbs.	Add 30c per queen when ordering disease resistant stock
1-24	\$1.40	\$4.50	\$5.85	\$7.20	
25-99	1.30	4.25	5.55	6.85	
100-up	1.20	4.00	5.25	6.50	

We are also happy to announce that we will have available May 15th queens of the **FINEST DISEASE RESISTANT STOCK** yet developed. They compare very favorably with the gentle temper of our proven regular stock. Their honey gathering ability is also equal to the best that we have to offer. All queens up to May 15th are sold out.

**THE RICH HONEY FARMS : Jeanerette, Louisiana**

### HERE'S A TIME SAVER AT A PRICE EVERY BEEKEEPER CAN AFFORD BROWN PAINT SPRAYER



Sturdily Built  
Aluminum Compressor on Heavy Steel Base  
Chrome Plated Gun

15-ft. Quality Hose

Price complete (except motor) \$26.95, F. O. B. Minneapolis. Shipping weight 21-lbs.

Send for Lewis-Dadant Bee Supply Price List.

**HONEY SALES COMPANY**

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### The Hive and the Honeybee

A complete descriptive preview of this amazing new book is now ready for you.

NO COST—JUST MAIL A POSTAL.

650—6x9 inch pages, hundreds of pictures. Sturdily made to last. Timed to meet the needs of today.

Book Price \$4.00

**Dadant & Sons : Hamilton, Ill.**



## JENSEN'S

### "Magnolia State" and Disease Resistant Stock

Favorable conditions last fall, and good wintering has brought our bees through in wonderful shape. Conservative bookings now enables us to accept some additional orders. Write or wire your estimated requirements for making up winter losses or for expansion, and we will advise promptly, what we are able to do for you.

Packages of pure Italian bees only, but can supply with queens of either stock, and will be available April 1st due to the early start we have made.

PACKAGES WITH "MAGNOLIA STATE" ITALIAN QUEENS

Prices	Queens	2-lb pkgs. with queens	3-lb. pkgs with queens
1-24	\$1.40	\$4.50	\$5.85
25-99	1.30	4.25	5.55
100-up	1.20	4.00	5.25

Disease Resistant Queens. Daughters of stock bred and tested in the North. Isolation bred, assuring greatest possible purity of stock and degree of resistance, plus other desirable characteristics peculiar to this strain. Prices

1-9, \$1.65; 10-49, \$1.55; 50-99, \$1.45; and 100 up \$1.40 each.

## JENSEN'S APIARIES

### MACON, MISS.

The business **QUALITY** built. Satisfaction Guaranteed.



### The Heart of Comb Honey is Foundation

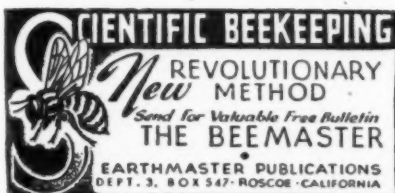
The biting quality of the honey, that delicate center taste is foundation. It must become a part of the honey, so tender, a touch of the tongue will crumble it; yet be so strong that bees work it out quickly and easily. Dadant's Surplus Foundation, fragrant and pure, thin and sweet, blends naturally with your finest comb honey, that your market grades are better and sales are quicker.

**DADANT & SONS**  
Hamilton, Illinois

**AUSTRALIAN BEEKEEPING NEWS**  
The Leading Bee Journal of  
Southern Hemisphere is the

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This year there will be a more  
plentiful supply of Lewis Beeware  
in our warehouse stocks. Maybe not  
enough for everyone. But—a word  
to the wise is sufficient. So be sure  
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**HONEY CONTAINERS**

Prices and quality that will please you.  
Our container list will give you complete  
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We furnish a complete pollen substitute,  
ready to use. An illustrated folder telling  
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Serving the Honey Producer of America  
Since 1938

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Newly appointed magazine of the San  
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ation. Read about California beekeepers and  
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Timely topics on western Canadian bee-  
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**QUEENS - Package Bees For 1948**

**ESTABLISHED 1883**

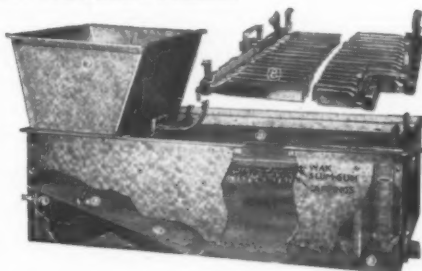
We know how to ship. We try to help you make money.  
With honey prices as they are, it's *best to buy the best*, at no  
increase in 1948 prices to you.

We like to have 50 per cent deposit and balance before shipping date.  
We believe this is fair to all—as we like to plan and ship the day you  
want shipment. **Price scale:**

	1 to 10	10 to 50	50 to 100	100 up
2-lb. package and queen	\$4.50	\$4.30	\$4.10	\$4.00
3-lb. package and queen	5.50	5.30	5.10	5.00
All untested queens		\$1.25		
		Tested queens		
		\$2.00		

**The Victor Apiaries**  
Uvalde, Texas

**BRAND CAPPING MELTER**  
IS THE MOST OUTSTANDING LABOR  
AND EXTRACTING CONVENIENCE  
IN MODERN TIMES.



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The past several years the de-  
mand for our equipment greatly  
exceeded our available supply of  
labor and materials. We are sorry  
that we could not take care of all  
of those who desired Woodman  
equipment.

With lower price of honey, the  
supply of equipment is catching up,  
—Yet the necessity for labor  
saving devices is more important.

Both labor supply and some ma-  
terials are easier, although costs  
continue high.

Send for our new price list  
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**A. G. WOODMAN CO.**  
GRAND RAPIDS 4, MICH., U. S. A.

**Package Bees and Queens**

Bred for Quality and Honey Gathering. Our bees have  
produced where others have failed.

**PRICES FOR 1948**

	Queens	2-lb.	3-lb.	4-lb.
1-24 -----	\$1.40	\$4.50	\$5.85	\$7.20
25-99 -----	1.30	4.25	5.55	6.85
100 up -----	1.20	4.00	5.25	6.50

You get better bred queens, over weight packages, baby bees  
and prompt delivery of every order.

Telephone 2546, Livingston, Alabama. Telegraph, Livingston, Alabama

Our Motto—"Once a customer always a customer."

**C. W. BAKER**  
SUMTERVILLE, ALA.



# As We

## *Bees for Seed or Honey*

SEVERAL Iowa beekeepers are building for the future along new lines. Vice-president of the Iowa Association, R. L. Griggs, tried the experiment of offering bees for clover pollination for a portion of the crop. The result appears to have been pleasing both to the beekeeper and the farmer whose clover benefited.

Advertising is now appearing in Iowa papers by beekeepers who offer to bring bees to clover fields for one-half of the seed crop above one bushel per acre. Since the average yield in Iowa of late has been less than a bushel per acre it is assumed that any increase above that figure will be the result of the activity of the bees.

Now that lower prices for honey are in prospect the beekeeper will do well to consider the possibility of getting a portion of his income from service in pollination. Reports coming to this office indicate a wide interest on the part of farmers in such an arrangement.

## *Tell the Public About Bees*

IN a recent radio address, Dr. R. K. Bliss, former head of the Extension Service of Iowa State College, called the honeybee the "Top Conservationist." Because she gathers a crop which would otherwise be lost, while rendering a great service in the pollination of commercial crops, he places the honeybee at the head of the list.

Bliss pointed out the changes that have come about through the destruction of the wild bees which now make the orchardist and the farmer dependent upon the honeybee for pollination of fruits and clovers. Thousands of listeners to station WOI have a better understanding of the place of the honeybee in the farm program after hearing the Bliss message.

It is much to the advantage of both the beekeeper and the farmer when the public is given information as to the part played by the bees in

crop production. The big problem is how to reach the great number of people who should be informed. It is probable that a larger number of men listened to the Bliss broadcast than would read an entire edition of a bulletin on pollination.

## *Lesson From Oranges*

IT was in March 1908 that the citrus growers of California took a very important step in the development of that industry. On March second of that year appeared the first advertisement for oranges in the nation. It was on the back page of the Des Moines Register which was selected for a test of the value of advertising in the sale of oranges.

A \$10,000 appropriation was made to tell the people of Iowa about oranges. Up to that time oranges were little used except for a special treat and in hundreds of households they were never seen except at Christmas time. The results of the test advertising campaign were far greater than expected. The sales of oranges in Iowa were increased by 50 per cent, and advertising became a part of the citrus growers regular activity.

Since that time the growing of citrus fruits has expanded far beyond the wildest dreams of the pioneers in that field. Citrus has become a staple on the tables in millions of homes, the market has been stabilized, and the prosperity of the citrus grower assured.

Prior to the time when advertising became a part of the sales effort of the citrus grower, his business was a perilous one. Oranges were high in price in times of prosperity and were a drug on the market when times were bad. The boom and bust cycle was very evident in the citrus business.

Until the beekeeper comes to recognize the importance of well-placed advertising, we can expect to meet similar conditions. We have a product which can be sold on its merits, but without advertising the demand will be spasmodic and uncertain. The big problem is how to find a way to insure that every honey producer will pay his fair share



# See It



of the cost of the advertising. There can be no question as to the benefit to be secured.

## *Appropriations*

THE public seems to have reached the conclusion that the only solution for its problems is a big appropriation of public funds. Each group argues that the amount asked is so small in comparison with the total outlay as not to be noticed. The spending has reached a point where it offers a threat to the stability of our government. The portion of the national income now consumed in taxes is coming close to the point that has resulted in the downfall of previous civilizations.

Instead of bringing an early solution of the problem for which it was granted, an appropriation usually becomes the basis for demands for increasing amounts. It would be easy to point out numerous such grants that have become a regular part of the budget coming up at each succeeding legislative session.

The head of one of the largest corporations is quoted as saying that his organization has been greatly disappointed in results from their research laboratories. It was assumed that when well-trained men were given ample facilities and freedom from financial worry that great discoveries would follow. It did not work out that way. The important discoveries continued to be made as they had in the past by men under pressure to meet the problems of production and distribution.

Before we ask for government funds it is well to make a careful study of the results that we are likely to obtain and inquire how we will get the money to pay the portion that will be added to our income tax. When the government makes an appropriation the tax collector will send us the bill.

## *Tar Paper For Winter Wraps*

OUR attention is called by A. G. Woodman to the fact that a black paper wrap for out-

door wintered colonies is a big help. He notes that snow and ice will melt on black pavement when the sun shines at a temperature of twenty degrees above zero.

The black paper absorbs the sun's rays and warms the hive to the point that the bees are able to clean house and move to new stores when otherwise they would be unable to make any adjustment within the hive.

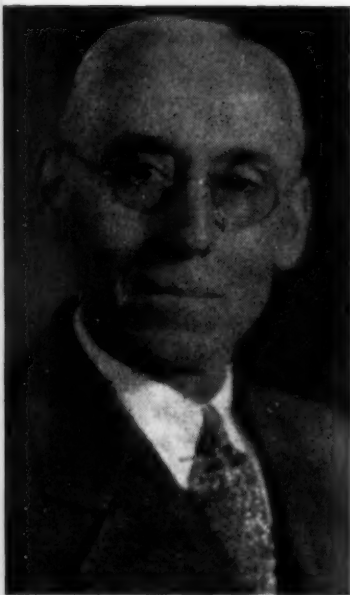
Woodman recalls the severe winter of 1903-4 when 75% of out door wintered bees in Michigan were lost. The winter of 1917-18 was nearly as bad. He has observed that hives wrapped in black paper in a location with good air drainage come through much better than those in insulated hives, packing cases, etc.

In long-continued severe weather a brief period of higher temperature which will permit the cluster to move to fresh stores will save the colony. The black paper absorbs enough heat from the sun to meet this need. Tar paper wraps with ample stores and an upper flight hole will go far to bring the bees through alive.

## *Overheating Honey*

BOOKS and lectures on proper food are just now very popular. Such books are having a large sale and in every big city lectures on food are attracting crowds. In one such lecture the audience was advised to use honey exclusively as a sweetening agent but warned at the same time that much of the honey on sale in the markets has been ruined by overheating.

Such complaints are frequent and there is ample evidence that many beemen are overheating their honey when putting it into cans. This is unfortunate. Every means should be used to get the honey into the hands of the consumer in the best possible condition. Instead of educating the consumer to expect honey to granulate as a natural process and to buy it in that form, we permit our customers to distrust honey when it shows evidence of crystallizing. In the effort to prevent granulation, too much honey is overheated and the fine flavor destroyed.



Dr. L. R. Watson about 1932.

# In Memory of a Great Leader

## Lloyd Raymond Watson

On February 27 came the telegram from Mrs. Watson that shook us all: "February 26, at 12:30, Lloyd died very suddenly from a coronary thrombosis." Words that tumble out when a friend is gone are heartfelt words. Leaders in beekeeping write us about Dr. Watson in a total expression that is a remarkable tribute to the long years of patient and farsighted guidance he gave us. Let us summarize some of these tributes to his memory.

AT the time Dr. Watson first demonstrated successful instrumental insemination of queen bees, his accomplishment received considerable acclaim, but since then too little has been heard of his work. Dr. Watson was able to devote only a part of his time to breeding. Almost continuously since Dr. Watson's discovery various persons in the Division of Bee Culture have been trying to improve the technique. The difficulties in reducing his discovery to a practical basis are apparent in the years that have elapsed as it was only about three years ago that Mackensen and Roberts were able to inseminate queens whose performance was fully as satisfactory as the best naturally mated queens.

We are now entering a period when great progress can be expected in studying inheritance in honey bees and in securing improved stock for the beekeeper. Not only should there be better honey producing stock but strains of bees should be developed for specific pollination purposes. These are needed at once.

Had it not been for the pioneer work of Dr. Watson we would hardly be warranted even in thinking about such possibilities. His discovery is the key to what will prove to be the most important research objective in the future in the whole field of apiculture. So Dr. Watson's contribution to beekeeping will continue to grow in importance as time passes.

James I. Hambleton,  
Div. of Bee Culture, Bureau  
of Entomology and Plant  
Quarantine, United States  
Department of Agriculture.

\* \* \* \*

THE death of Dr. Lloyd R. Watson brings to mind two important occasions in which he was involved. Shortly after I arrived at Cornell University, Professor R. A. Emerson, under whom Watson had done his major graduate work, announced that Watson was coming to Ithaca to demonstrate his technique for instrumental insemination of queen bees. Dallas Lore Sharp was here and went along. It was the first time Watson had demonstrated to

Best known to his many friends in about this guise.



About 1925

A recent picture of Dr. Watson and Mrs. Watson, taken by Dr. O. W. Park.



others and it was a thrilling event.

The second occasion was when the International Entomological Congress was held in Ithaca and he demonstrated the technique to a larger audience. At other times it was possible to talk with him freely about his work so the two mentioned occasions were not the most rewarding, but they were the most thrilling.

Watching him at work one was impressed with the care and caution he used. No one using his technique could be more painstaking. Whatever important results may later come from the application of instrumental insemination, the outstanding contribution that Watson made was in devising the original method and the original instruments and in safeguarding their use by caution.

I knew Dr. Watson in other ways too. He was a delightful man with whom to be associated as a host of friends will attest. He was not narrowly tied to his specific field but he was also a good citizen of the community in which he lived and labored.

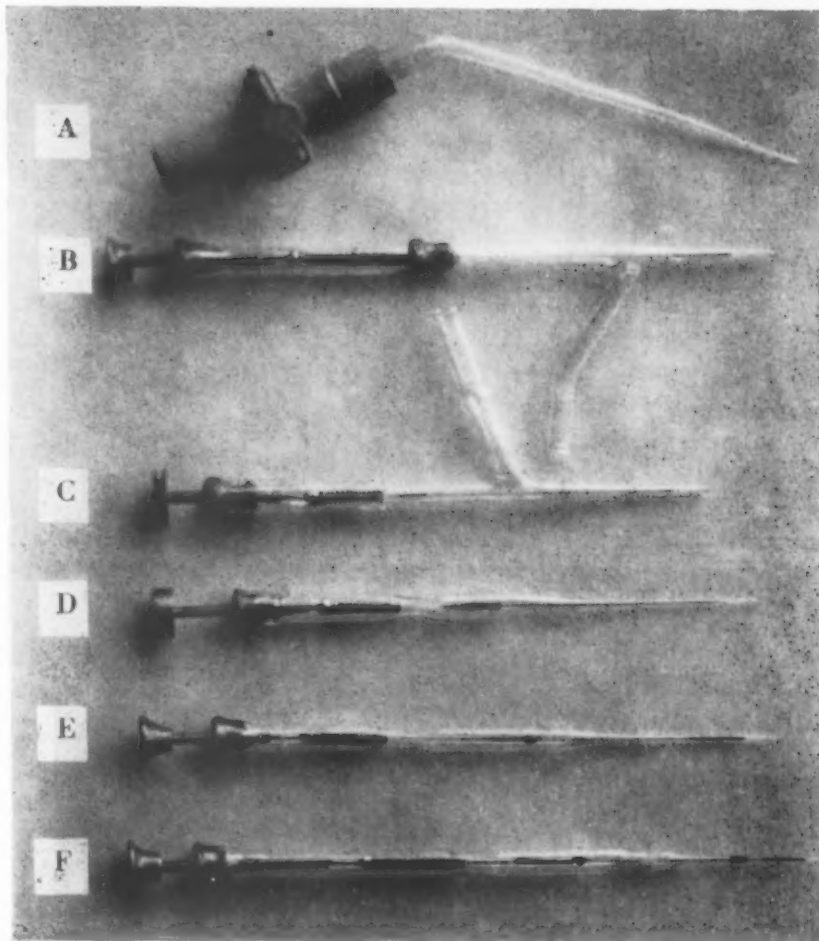
Dr. E. F. Phillips,  
Cornell University,  
Ithaca, N. Y.

\* \* \* \* \*

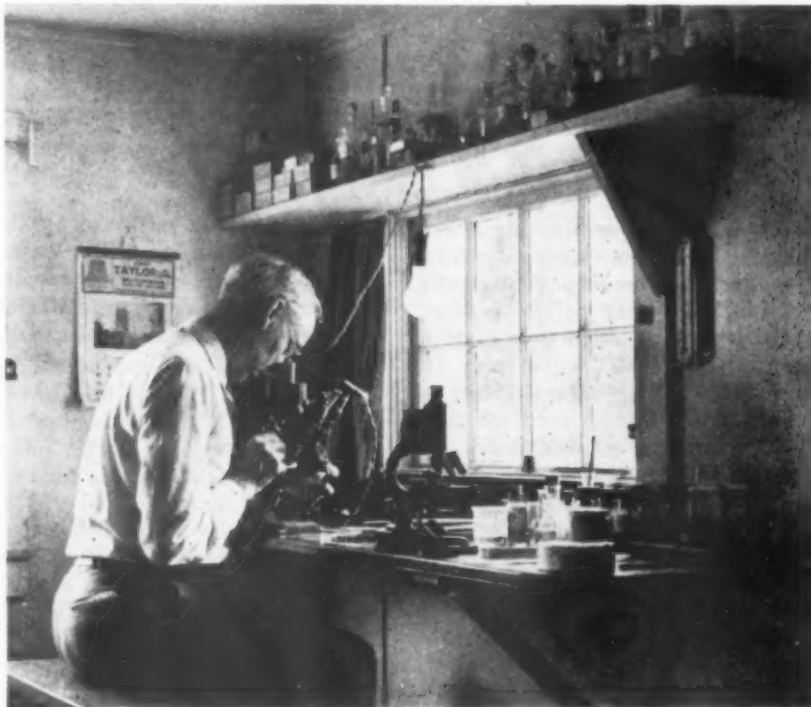
**T**HE name of Dr. Watson has been published in every continent of the world because of his epoch-making discovery. Instrumental insemination gave to the beekeeper for the first time the power to select the individual drone for mating with the queen bee. Its development was the biggest single advance in bee breeding since the discovery by Dzierzon, some three-quarters of a century ago, that normally the drone of the European races of the honey bee is produced parthenogenetically.

The principle of his method remains unchanged. It involves the transfer of sperm from the drone to the queen with a microsyringe.

I first met Dr. Watson at the historic demonstration before the American Association of Economic Entomologists in Philadelphia in 1926. I was impressed always by his unbounded enthusiasm, his candor, his eagerness to have others take advantage of his discovery and his unselfish devotion to the field of research. The material awards seemed to play little part in his plans except as a necessary means of carrying on his research. Never once did I hear him criticize others. A visit to his



Various microsyringes, from the earliest (A), to the later days (F). The lower scene shows Dr. Watson at work with instrumental insemination in his laboratory.







The first and perhaps the best loved work shop was little more than a glorified shed. But all of us who worked there felt its warmth and greatness. The group, with Dr. Watson at the left, and some of his early assistants, stand in front of a new and well equipped modern laboratory at Dr. Watson's home.

home was a rare pleasure. My esteem for him as an individual as well as benefactor of beekeeping was very, very high.

He found a solution to a problem that has confronted beekeepers for ages because he was a dreamer of dreams and so convinced of their reality that he could stay at the task of translating them into actuality in the cold light of everyday life in spite of all difficulties. His devotion has opened the way to advance beekeeping by leaps and bounds instead of by the snail's pace of previous breeding work.

W. J. Nolan,  
Chevy Chase, Maryland

IN the passing of Dr. Watson, beekeeping has lost an outstanding pioneer in bee breeding. His long and useful life began in Cuba, N. Y., Sept. 7, 1876. He graduated with an A.B. degree from Alfred University in 1905. After teaching and serving as principal in a high school, and engaging in beekeeping for three years in Pennsylvania, he was instructor of Agricultural Chemistry at New York State School of Agriculture, at Alfred, from 1911 to 1918, receiving his A.M. degree also. He was then extension specialist in apiculture at Connecticut Agricultural College for a short period, assist-

ant to Dr. E. F. Phillips in the Division of Bee Culture at Washington from 1919 to 1921 and state apiculturist of Texas from 1921 to 1922. He left Texas to study beekeeping under Dr. Phillips and genetics under Dr. R. A. Emerson at Cornell University, receiving his Ph. D. degree there in 1927. He then returned to Alfred University to become Director of Research and Professor of Chemistry.

Dr. Watson wanted to breed a better bee and he realized that the control of mating was the key so he directed his efforts toward instrumental insemination. This had been tried by a number of persons with little success. McLain in 1886 had claimed some success. Jager and Howard in 1914 inseminated one of eight queens successfully but this queen soon became a drone layer and during the next two years they were able to inseminate successfully only one of fifty-five queens operated on. Shafer had failed completely to make the drone organs evert and ejaculate into the queen by hand manipulation. Others had also largely failed.

This was the discouraging place of instrumental insemination when Watson began work. He deserves much credit for seeing the problem through. Only those who have worked on a difficult problem for years and finally succeed can know the thrill Dr. Watson must have felt when one of his queens produced abundant worker bees in evidence of successful insemination.

At Alfred he developed an experimental apiary and a laboratory at his home and here, with various foundation aids and with help from Alfred University, and with unselfish and able assistants, both men and women, he carried on his research. Students from the University and many interested in bee breeding from this country and from abroad came to observe his methods and to study under him.

Watson was a good technician and built a neat and efficient insemination syringe that went through many stages before it worked to his satisfaction. It was made largely of glass and he took great pride in his ability as a glass blower. He made instruments for other workers.

The Watsons had a wonderful home and Dr. Watson loved his home and its associations. He loved music. When the University planned to en-  
(Please turn to page 196)



Rev. Lorenzo Lorraine Langstroth, the father of American beekeeping.

## Langstroth Memorial Planned in Massachusetts

By F. R. Shaw

**M**R. L. L. Langstroth, who by his discovery of the bee space made possible the development of commercial beekeeping, passed a considerable part of his life in Massachusetts. Many of his important investigations were conducted in Greenfield where Langstroth served as pastor of the Second Congregational Church.

Not until last year had any action been taken in this state to indicate the importance of Langstroth's contributions to agriculture, nor to indicate that Greenfield was the location where many of his important experiments were conducted.

Last year, a committee was appointed to investigate the possibilities of erecting a suitable memorial to Langstroth. The committee is composed of George Leukhardt, president of the State Beekeepers' Association, Leonard Rice, vice-president of the same organization, Dr. Harold Bennett, sec.-treas. of the group. Dr. B. N. Gates, as representative of the State Department of Agriculture,

George Rea, as representative of the National Federation of Beekeepers' Associations and Dr. F. R. Shaw, University of Massachusetts, as chairman.

Following much thought, it was felt that the logical site for a memorial would be on the grounds of or in, the Second Congregational Church at Greenfield. The representatives of this church were contacted and were in hearty accord with the plan. The final decision has been made to locate the plaque or stone at the location mentioned.

At the present time it has not been definitely decided whether a metal plaque or a suitable stone marker will be selected; whichever is finally chosen will depend on the support the plan receives.

Some of the manufacturers of bee supplies have already indicated their support of the plan. This is most gratifying. However, if the dedication is to be conducted in a suitable manner, additional financial support

is necessary. Records will be kept of both the contributors and the amounts contributed. Beekeepers, manufacturers, dealers in bee supplies or other interested persons may contribute. Any amount will be gratefully received and acknowledged. Contributions can be made payable either to F. R. Shaw, Fernald Hall, University of Massachusetts, Amherst, Massachusetts or to Dr. H. J. Bennett, secretary-treasurer of the state association, Hampden, Massachusetts.

It is hoped that the dedication can be held during July 1948. This will approximate the hundredth year of the discovery of the bee space by Langstroth.

Dr. E. F. Phillips, who is more familiar with the life of Langstroth than any other living man, has consented to deliver the address.

Interested persons are urged to contribute to make possible the erection of a suitable remembrance to Langstroth, the father of commercial beekeeping.

# American Bee Breeders' Association



By  
E. C. Bessonnet, President

THE need for a bee breeders' association has been the subject of discussion for a long time, but serious plans for organization did not start to take shape until several bee shippers became interested during the Tampa meeting in 1947. It was from this initial start that the bee shippers attending the Biloxi convention in the fall of 1947 realized that the time was ripe for an all out movement to organize.

The reaction among the shippers at Biloxi clearly indicated that there was a real need to organize; and with a tentative program of aims and objectives discussed and adopted, the bee breeders, with an organization committee appointed by the president of The Southern States Federation, decided to hold a convention at Meridian, Mississippi, immediately after the National Convention held in Salt Lake City. The purpose of this move was to familiarize the California breeders, and others present at Salt Lake City, with the proposed program and urge them to consider joining the American Bee Breeders' Association, thereby making the activities of the Association nation-wide in scope. The program was presented to a large number of breeders at the Salt Lake City meeting and the response was gratifying.

With rules and regulations governing the quality of bees and queens, together with sound business practices, this organization believes

that the package and queen buyers will welcome the idea as a move to improve their relationship. According to reports from many sources, entirely too many inferior queens and packages have found their way to the consumer, and this has had an unfavorable reaction on the use of commercial bees and queens. The rules and regulations are not stringent, as it was not the intention of those attending the Meridian meeting to make it impossible for the average breeder to join. It was the consensus of opinion among those present that most breeders will make every effort to improve the quality of his product to avoid complaints to the officers of the Association from the buyers. All complaints received by the Association will be considered individually and action will be taken to decide the extent of the penalty.

Our most effective instrument will be our association emblem which will give the buyer reasonable assurance that he is dealing with a breeder who will strive to improve his product and service. It is inconceivable how any reliable breeder will refuse to join, as this would place him in a questionable class. The buyer will ultimately demand that his breeder use the emblem to provide the protection which the emblem represents.

Stock improvement is recognized as our prime objective. At Meridian this matter was fully discussed and several ideas considered which only confused the issue, as so many good plans were presented which could result in a comprehensive program. The Executive Committee will look into the present possibilities and submit a report on their work. Plans for establishing an independent breeding project is perhaps the most practical approach to obtaining the desired results. Financing this type of program is possible, providing that a large number of breeders are willing to contribute substantially to its support. We recognize that the whole industry will ultimately benefit from any improvement in stock and we have been advised that other associations and honey producers would willingly contribute to the support of

such a project. It will be necessary to wait until next fall to make definite plans so that the sentiment of the industry and the cooperation of the present stock improvement agencies will be given a chance to offer assistance.

Our industry can enter into a new era of progressive thought and action if we work together for a common cause. In this new era we are approaching, the "Santa Claus" idea, which has prevailed in the past, must be replaced with the idea that an investment is necessary if we are to realize a profit. Profit on an investment is largely confined to the amount invested, thus a limited investment produces a limited profit. Likewise, bad investments produce losses.

Let us assume that we can increase honey production in the next ten years about 10% with improved stock. That figure is reasonable in view of the available records on the productive ability of our better stocks. If we do no more than confine our work to distribution of the best stock available in this country, honey production would be greatly increased. There has been no organized effort to my knowledge to exploit these possibilities for the betterment of our industry. When our breeding work gets under way, it will be necessary to evaluate the present sources of stock with a view of using the best available for foundation. There will come into the picture preference for certain strains to meet the different environmental conditions. The use of too many strains would complicate the breeding work and increase the operating costs materially.

If the honey producer could work out a plan whereby the majority of the producers would contribute to the breeding project, the burden would be divided among thousands instead of a few hundred. This would make it possible to establish test yards in the honey-producing areas for the purpose of selecting superior stock and again tested for breeding. Is the industry ready to proceed with the work on the basis of all contributing to the program, or will the bee breeders be expected to carry the whole load? The answer to that question will determine the type of program we can adopt and the type will have a direct bearing on the result.

The officers and the members of the American Bee Breeders' Association are anxious to know what the



present breeding agencies have to offer, and what the industry as a whole can do to help us on our forward march. The future development of our industry will depend to a great extent on improved stock so as to assure increased production. Along with increased production, ways and

means must be found to publicize honey through the medium of magazine and radio advertising. The per capita consumption of honey is too low, and only proper advertising will move the crops that our improved strains of bees will produce. It leaves us with the thought that collective effort and **investing** in a stock im-

provement program and in advertising give us the basis for our future prosperity. Keeping a padlock on the pocketbook will not increase the amount inside, so let us open it up and make a good investment in the future of our industry.

—  
Louisiana.

# Beekkeeping in Scotland

By A. Niven Campbell

Former Member of Scottish Beekeepers' Association

**B**EESKEEPING in Scotland, as in most other places, has its many problems. The most important of these arise from the climate, which is normally damp and most unsettled.

With the approach of spring, it is necessary to have all colonies as strong as possible, so that they may take advantage of the honey-flow from fruit trees. Due to the variability of the weather, bees may be able to work only a few days while the fruit trees are in bloom; consequently, the beekeeper must be ready to make the most of these few days. He does this, usually, by starting to feed his bees early, even though the bees themselves may have abundant stores to carry them through. It is thought that feeding early in spring, stimulates and encourages them to go about the usual spring chores of cleaning out the hive, egg laying and brood raising.

At this time, the beekeeper also re-queens and, if necessary, unites any colonies that will not be strong enough to take advantage of the early honeyflow.

Swarming during the spring flow must be prevented, if possible. Numerous methods have been tried, and all have been highly advocated by their particular exponents.

One method that has been found very successful in Scotland has been to give plenty of room in the brood chamber. This is done by removing perhaps two frames of honey from the brood chamber, and substituting two frames of drawn comb near the center of the brood nest. If there are any weak colonies in the apiary, then two frames of brood can be taken from the hive which has the evil intention of swarming and trans-

ferred to the weak hive, their place being taken by the empty frames of drawn comb.

Another good method, when two body boxes are used on one hive, is to remove all frames containing queen cells from the lower brood nest, cut out the queen cells, and place these frames in the upper nest, substituting combs of drawn foundation in the lower brood nest. If only one or two frames of brood are left in the bottom and the nest made up of empty drawn comb, a queen excluder is then placed over the lower box and the queen confined to the new brood nest.

This method, which is effective in controlling swarms, also allows a great deal of control to be exercised over the queens and enables young queens, if desired, to be hatched out above the excluder in the top box.

When the last of the fall honey has been gathered, and the purple of the heather fades from the hills, the beekeeper has now the worry of winter to face.

If the season has been good, then plenty of honey is left in the hive to carry the bees over the winter. If not, then feeding must begin and the hive stocked up before the weather is too cold to handle the bees.

Colonies should be strong before attempting to winter them. It has been found that the double-walled hive is by far the best hive for wintering, since it helps to maintain more even temperatures inside the hive, no matter what the outside conditions may be. This is equally true in summer, as a double-walled hive will provide its own shade.

This can be seen from the ordinary dwelling house. It will be readily

agreed that a house with double walls and some form of insulation is much more easily heated in winter than a house without insulation and, in the warm months, the house with insulation is more easily kept cool.

This means a great deal less work for the bees in fanning in summer, and in the cluster in winter, with consequent saving in stores, as it is known that a badly wintered hive consumes a great deal more honey.

It has been said that it is too expensive to have double-walled hives where the hives are often built up with supers to a considerable height, but at least the hive should be so constructed that the portion used for wintering is permanently double-walled, the single-walled supers being added above this when desired.

In Scotland, it does not pay the beekeeper to have his bees work in sections, the price of "Comb Honey" being only a few cents more than "Run Honey." This is a regrettable situation since, in the writer's opinion, honey loses a great deal of its charm and its appeal to the eye and to the palate when separated from its natural container, the comb. Could not something be done to induce the consumer to pay more for "Comb Honey" and so encourage the beekeeper to produce more sections?

Scottish beekeepers have found that, if they give to the bees the best possible hiving conditions which they can afford and attend to their needs as expertly as possible and only when necessary, the bees themselves will do all in their power to combat the vagaries of the weather, accumulating a goodly store for themselves and for their benefactors.

— Delaware.



# Let's Be Sensible About The Spray Problem

By F. B. Paddock  
Ames, Iowa.

THE beekeeper is in the middle of a big area of confusion looking in all directions for some relief. One of the worries right now is the disposition of the 1947 crop which was produced at a relatively high cost. Another worry is the 1948 outlook which is one of uncertainty as the beekeeper is confronted with increased costs of production, uncertain pasture, and an uncertain market. These are worries which have been in and out of the picture for the beekeeper over many years. There is now a new problem which is adding to the confusion and since it is a new problem, it is giving great concern. This problem is the so-called spray program.

Let us take a look at the situation. It is always interesting to get as many angles on a situation as possible rather than to worry along with just one angle which increases in size as the worry progresses. What is this spray program? Where does it hurt the beekeeper now? Well, probably it hurts the beekeeper now and may hurt for some time in the same place, that is the matter of a poor program of spraying. This applies to the time of application of the material as well

as the method of application. Those who are most concerned about the ultimate success of the spray programs feel that this is the major point of attack.

The spray program can be divided into two general groups, namely insect control and weed control. It has been a wonderful opportunity to contact many farmers throughout the state of Iowa this winter in connection with their proposed effort in the coming season on spraying for

insect control and weed control. It is interesting that these farmers are fully as confused about the whole setup as are beekeepers. It is very evident to every producer of crops that the time is at hand when something must be done to protect those crops from insect ravages and from the inroads of weed competition. The farmer wants to do something. At the same time, he is anxious to do that which is right. Of course, he is thinking of his own interests. But, he realizes it will be necessary to approach this problem of spraying in the right manner to obtain the results which are justified.

The confusion is brought about to a large extent by the competition among commercial interests for the sale of both equipment and chemicals. What is the best type of spray machine to meet the requirements of the general farm spraying for insects and weed control? How much should a good outfit cost? What requirements must this outfit meet to give satisfactory results? Each chemical has its own trade name which in some

Spray applied where it will do the most good is less to be feared than either promiscuous spray or dust.



This spray hugs the ground and is little affected by wind or air currents.

instances covers up the content of the material. The formula is different for the materials sold under each trade name. How is the farmer to know what is the best machine for him to get and what is the best material for him to use? As a matter of fact, some of them are so confused that they are about to put weed killer out for insect control.

Of course, the airplane is a spectacular method of applying material for corn borer control, but every farmer doesn't want to own his own plane. He wants a machine which will be available to him to do the work just at the appropriate time. Custom spraying has not given satisfactory results because the number of spray machines available are too few to apply the material at the critical period.

The insect which is attacking Iowa agriculture and the agriculture of the Central West at a vital point is the corn borer. Certainly, any farmer who is growing corn is justified in considering the loss caused by this insect and any means possible of reducing that loss. The loss is an expensive item for any farmer. However, control measures must be effective to justify the expense of the machine and the material. It has been shown that a good spray program can be really effective in controlling the corn borer and it can be made effective by every individual farmer if the program will be properly conducted. Here again the aim of those directing the program is toward maximum effectiveness. The trend is away from dust and airplane application and toward liquid sprays applied by machines, either especially constructed or adapted for use in connection with the farm tractor.

Then there are certain insects which reduce the effectiveness of legume seed production. This is closely associated with the interest of the beekeeper. There are flower insects which are a direct deterrent to seed production. In some areas, grasshoppers take a considerable toll, and it is possible that a grasshopper scourge may be building up such as was seen in 1930. These insects must be controlled.

Any control effort may backfire. If the control is in reality poor, then the costs of that operation are relatively high. The individual farmer at the present time is skeptical regarding his ability to carry forward a proper program of insect control to obtain maximum results. It is another

complicated factor in the production of crops, and incidentally livestock. Costs are relatively high and will be relatively higher if there is a period of recession in prices for farm crops. Spray machinery will have to be given excellent attention to be effective after the first season. It is an entirely new venture for the farmers of the Middle West to introduce spraying into their routine of crop production. All insecticides thus far offered for insect control are toxic to bees as has been determined by Eckert and reported in the last issue of this publication. Materials are based upon their ability to kill insects and the honeybee is no exception.

Let us take a look at the weed-control situation. This program is probably coming in more rapidly than the program for insect control. Few realize how extensive the organization is which has been set up for years for weed control. There are weed commissioners in every county charged with the responsibility of weed control. Now that the machines have been much improved and the chemicals are available, it is expected that very rapid strides will be made in weed control. Everyone will gladly welcome the control of most of the weeds which serve as an outline for our highways, especially the secondary roads. Most of these weeds are obnoxious and, of course, are looked upon by the beekeeper as a nuisance. As he sees the picture, this area could be in plant growth which would supply pasture for the bees.

However, this control of weeds may well take out of the pasture picture several sources of nectar which have been of benefit to the beekeeper. The public program of weed control will be paid for out of the general tax funds. The private program of weed control will be paid for by the individual. This will be restricted to spraying in fields of oats and corn for weed control. A suggestion has even been made that weed control will reduce the labor involved in cultivating fields. Again, the farmer is very much confused about what needs to be done and how best to do it. Again the control effort will backfire if it is not properly conducted. It will likewise be expensive to the extent that it is ineffective. There is another feature involved in weed control. The ineffective program will take out beneficial crops as well as harmful weeds so the ineffective application will be immediately realized by the farmer himself.

Now, we enter the stage of procedure for beekeepers. What can beekeepers do to aid in this problem confronting them? Already beekeepers have made themselves more than noticeable by their stand and their pronouncements. Beekeepers have stood on their personal rights and on property rights through courts. Beekeepers have expressed themselves vociferously to anyone and everyone in their community regarding the spray program. They are becoming notorious in their community as "aginners." They are thereby setting themselves apart from the interests of the community in general. It is admitted that there is a conflict but the beekeeper will have little to gain by having this conflict meet head-on. The spray program is here and here to stay. No one would think of allowing the corn to be reduced 40 or 50 per cent by corn borer just to save a few colonies of bees which belong to another individual in the community.

The suggestion is made that the beekeeper should build on the feeling which is already growing that bees are in reality a part of general agricultural production. The enthusiasm for the pollination services of bees has increased rapidly and is due to increase much more in the near future. It is not advisable then to divorce beekeeping from agriculture by personal antagonism.

Rather, the beekeeper should incorporate himself in any and every effort to develop an educational program for the correct spraying for insect control and weed killing. Every beekeeper should align himself with the county agent in any organized effort which may be underway in the county. Every beekeeper should have all the information available on spraying in order that it may be given from time to time to those people who may be confused in how to proceed with their effort of insect control.

The beekeeper cannot afford any backfire on himself or the industry which he represents in his present effort to survive a combination of unfavorable conditions. It should not be necessary to remind the beekeeper that the boat was missed in developing a market for their product when they neglected the housewife. It should be example enough to direct any effort in the future to become a part of the program rather than to sit on the sidelines and comment about the results.





This picture from the Bureau of Entomology and Plant Quarantine, U.S.D.A. shows pollen supplement cakes as used on colonies in early spring.

## The Use of Pollen Substitute and Pollen Supplement

**B**EES need an abundance of pollen for development of food for the growing bee larvae in the cells. During most of spring and summer, field bees are able to gather more pollen than they need and will store a surplus of it for future requirements. In late winter, when brood rearing begins again, this store of pollen will sustain the growing larvae as long as it is within reach of the bees or until it is used up. Then brood rearing will diminish until the bees are able to gather new pollen in spring.

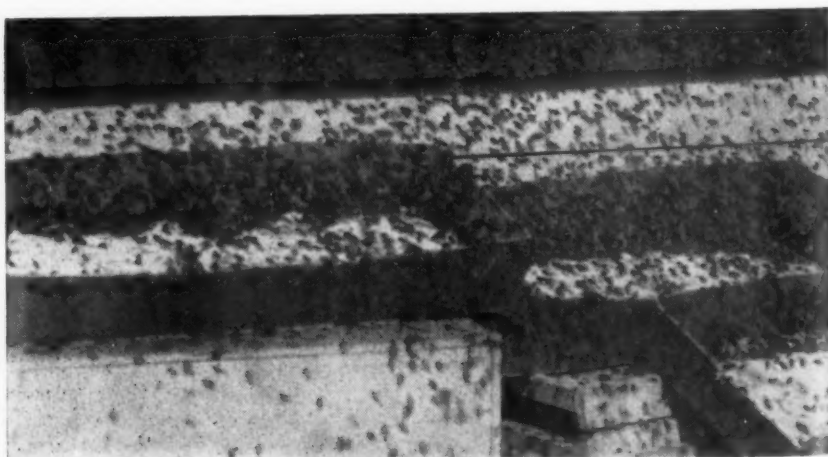
Some colonies are not able to gather enough surplus pollen the year before to continue early brood rearing without this interruption. The beekeeper should assist his bees in this period of distress by providing the colony with either a pollen supplement or a pollen substitute. The substitute is used to replace pollen entirely with a protein food of similar nature; the supplement is a suitable food material fortified with natural pollen.

Pollen substitute may be used for

brood stimulation in early spring for a period of about three weeks before natural pollen is available to the bees in the field. The supplement is more attractive to bees than the substitute and they use it most years over a longer period of time. However, it is difficult to obtain natural pollen from which to make pollen supplement, since this must be done by

trapping the pollen as the bees carry it into the hives. The substitute is made entirely from available materials and is easier to provide.

The use of either the substitute or supplement is highly advisable for package bee colonies or for new divides or nuclei. Whether or not to use them with strong, overwintered colonies must be decided by contrib-



Dry pollen substitute may be fed in trays near the bees. It is best to provide a shelter so rain will not wet the material. (Photo from University of Minnesota).

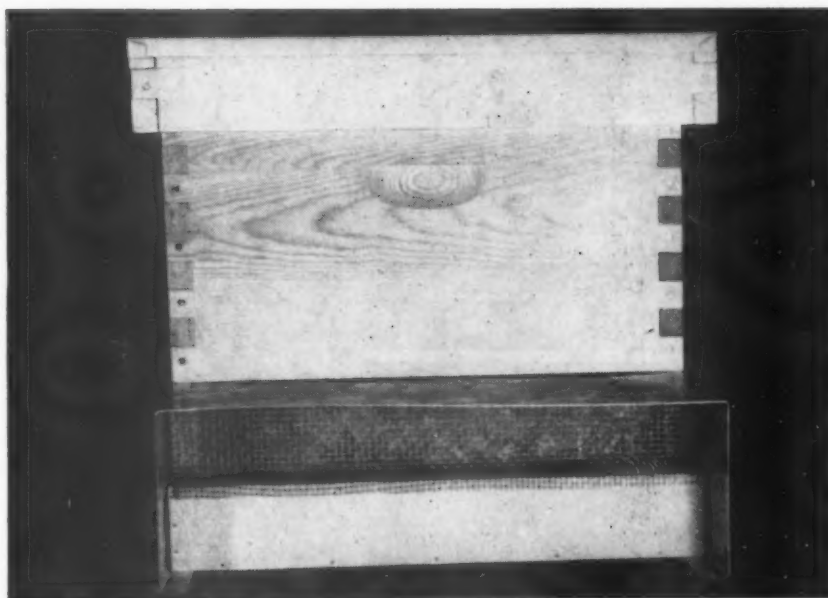
uting conditions. If their pollen stores are scant, it will help to augment a limited supply by giving a pollen food. If the spring is cold and colony development slow, many colonies will benefit greatly from such feeding. When colonies have an abundance of stored pollen they will need no help.

Feed from 1 to 2 pounds of substitute or supplement at a feeding for each colony, beginning, as nearly as possible 8 to 12 weeks before the honeyflow, feeding every 10 days until natural pollen is abundantly available.

The following are satisfactory formulas:

The pollen must be trapped for this the previous season in pollen traps applied at the entrance of enough colonies to provide the amount of pollen the beekeeper figures he will require. By test, it has been found that one colony, if a good collector, will provide enough pollen, when used according to the formula for the supplementary mixture, to feed 50 colonies.

The formula for making fifty 1-pound cakes is as follows: 4 pounds of dry pollen is softened with  $2\frac{1}{2}$  cups of warm water. This moist pollen is added to 30 pounds of thick sugar sirup made by dissolving 20 pounds of sugar in 10 pounds of hot water. Twelve pounds of expeller process soybean flour is added to the sirup and pollen mixture and stirred to produce a uniform mix of doughlike



Pollen traps at the entrance of hives will collect pollen for use the succeeding season. (Photo by Carl Killian, Illinois).

paste, just short of being runny. If necessary add more water to produce the right consistency.

Cakes of this mixture should be placed directly over the bees and on the tops of the frames, forcing the cakes down between the combs to some extent. Cover the cakes with wax paper to prevent too rapid drying. New cakes should be added before the previous cakes are all consumed.

A mixture of two or three parts by weight of animal type brewers' yeast with six parts by weight of expeller process soybean flour makes

a very satisfactory substitute mixture. Moisten the required amount with sugar sirup made with two parts sugar to one part water, until you have a soft paste which is just short of runny. It is used in the same way as pollen supplement.

Pollen substitute may also be fed in the dry form outdoors in any suitable container sheltered from possible wet weather. Bees seek it eagerly when they fly well and before natural pollen can be obtained. This method is somewhat wasteful and, when bees are not able to fly, they do not have access to the material.

## Another British Bee Book

The Kingsgate Press in London sends us a copy of "Down Among the Bee Folk," by Victor J. Smith. A small cloth bound book of 75 pages. It is adapted particularly for the youngster to give him an insight into the activities of the bees and is written in a very interesting manner.

The price of the book is announced at 3 shillings and six pence (75 cents present rate exchange). Copies may be secured from the publisher by international money order.

## Bird's-Foot Trefoil

Probably the first bird's-foot trefoil to be planted in the midwest was in our honey plant test garden at Atlantic, Iowa, in 1938. This trefoil is still in good condition in its tenth season. In that time there have been wet years and dry years and years with moderate rainfall but every year it has done well. It appears to be unusually drought resistant but does well in wet seasons as well.

It does not do so well when grown by itself, but thrives along with bluegrass or timothy. It appears to be at its best when grown with bluegrass. A combination of bird's-foot trefoil, white Dutch clover, and bluegrass makes an ideal pasture for both cattle and bees. The white clover does well in dry weather and the trefoil does well in either wet or dry. Trefoil is a good soil builder, is attractive to the bees and good for either meadow or pasture. This new legume has come to stay and will become of increasing importance as it becomes better known.

## New Edition of Wedmore Book

A 1947 corrected edition of Wedmore's Manual of "Bee Keeping" is now out. Our readers undoubtedly are acquainted with previous editions. This edition contains 375 pages, is cloth bound and retails for \$5.00.

The publishers are Longmans, Green & Co., Inc. in New York City, and copies may be obtained from them or by ordering from the office of the American Bee Journal.

# Apparatus for Artificial Insemination of Queen Bees

By C. L. Farrar

U. S. D. A., Agr. Res. Adm., Bureau Entomology and Plant Quarantine\*

**B** THE hope for improving honey bee stock through controlled breeding has become a reality during the last few years. In 1926 Lloyd Watson demonstrated that instrumental insemination of queen bees was practical, and since that time numerous workers throughout the world have used his technique with some success. However, present procedures for inseminating queens to make them capable of heading normal colonies were not worked out until the summer of 1944.

There is little likelihood that artificial insemination will be used in the direct production of commercial queens. However, in order to develop, test, and maintain superior breeding stock, artificial insemination is essential.

The close cooperation between the Bureau of Entomology and Plant Quarantine and the Wisconsin and Louisiana agricultural experiment stations has made it possible to perfect the technique of artificial insemination. Many persons have contributed to the advances made, but Harry Laidlaw, Otto Mackensen, and William C. Roberts have made possible the present practical procedure. All three of these men have

\* In cooperation with the Wisconsin Agricultural Experiment Station.

## APPARATUS FOR THE ARTIFICIAL INSEMINATION OF QUEEN BEES

- A.** William C. Roberts preparing to insert syringe, left-hand operation. Back view of apparatus.  
**B.** Position of queen and use of valvfold probe with inserting syringe.  
**C.** Front view of apparatus for right-hand operation.  
**D.** Unassembled parts of apparatus.

1. Base
2. Foundation bar
3. Mounting block for sting holder
4. Mounting block for queen holder
5. Mounting block for ventral plate holder
6. Sting holder
7. Ventral plate (sternite) holder
8. Plastic queen holder
9. Plastic stopper for queen holder (also delivers carbon dioxide)
10. Plastic syringe tip
11. Syringe head with rubber dam for plunger seal
12. Syringe barrel
13. Mounting block for syringe
14. Syringe plunger
15. Syringe turning screw with coupling and universal joint
16. Valvfold probe for right-hand operation
17. Valvfold probe without handle for left-hand operation

The metal parts are Duraluminum with brass fittings. The base is channel steel with black crackle finish. Leather washers are used in 3, 4, 5, and 13 to provide free movement but positive position. Parts 3, 5, and 13 also have set screws with rubber seats for tension adjustment.



worked on the project at the Southern States Bee Culture Laboratory of the Bureau, and Dr. Laidlaw and Mr. Roberts for several years in addition at the University of Wisconsin.

Dr. Mackensen is now in charge of bee breeding and genetics at the Southern States Laboratory at Baton Rouge, Louisiana. Mr. Roberts is stationed at the North Central States Bee Culture Laboratory at Madison, Wisconsin, where he is also engaged in breeding work. Stock is tested for production characteristics at Madison and for disease resistance at the Intermountain States Bee Culture Laboratory at Laramie, Wyoming.

Laidlaw's (1) studies of the morphology of the queen's reproductive organs showed that the valvofold presented an obstruction that interfered with successful insemination, and that when it was lowered with a suitable probe the semen could be properly placed in the oviducts, from which the sperm migrate into the spermatheca.

Mackensen gave Roberts his first lessons in artificial insemination of queen bees, but these men have worked together in the development of the apparatus \*\* shown.

In 1943-1944 a number of queens artificially inseminated by Mackensen and Roberts headed normal colonies as successfully as naturally mated queens. However, many required 2 to 5 weeks longer to start egg laying than did naturally mated queens. This resulted in much loss of time as well as heavy losses of queens while they were in nuclei.

During the summer of 1944 Mackensen (2) found that the use of carbon dioxide as an anesthetic during insemination stimulated oviposition. The inseminated queens began laying in 10 to 17 days after emergence, which is normal for queens that mate naturally. The next spring he found that oviposition of virgin queens could be stimulated by treatment with carbon dioxide without insemination. This discovery has made it possible to obtain drones from virgin queens and later to effect self-fertilization by inseminating the virgin queens with sperm from their own drones.

The delicate microsyringe used by Watson and others had to be made by drawing glass tubing and cementing this finely drawn glass tip to a mechanical pencil or similar device for operating the suction plunger. Hours, or even days, were often required for the operator to draw and

polish a tip that was just right, only to break it the first time it was used. It has been difficult to train beginners because the experienced technician could not allow anyone to practice with such a delicate syringe.

Roberts (4) has overcome this difficulty by designing an all-plastic syringe which operates better than the mechanical pencil. Duplicate tips permit interchange for sterilization. The plastic tip is less likely to be damaged and is easier to polish than the glass tip.

Bee breeding at present is not much further advanced than was corn breeding in 1910. Only after more than 20 years of the combined efforts of most of the state agricultural experiment stations, the United States Department of Agriculture, and some private breeders were farmers able to obtain hybrid seed in any quantity. Improvements in hybrid corn are still being made. It will also take time to produce the kind of bee that beekeepers want, but we now have the tools with which to work.

Preliminary breeding studies indicate that procedures for improving honey bee stock may follow a pattern not unlike that used in corn breeding. By the use of the genetic principles worked out for other forms of life and of proved breeding methods, the honey bee stock may be improved quite rapidly. As soon as outstanding parental lines that combine well are established, rapid progress may be expected owing to the high reproductive rate of the honey bee.

Genetically controlled hybrids should not be confused with the so-called hybrids which the beekeeper now associates with ill temper and a lack of uniform color. These undesirable characteristics can be eliminated from breeding stock in the same manner that good qualities can be built up. The beekeeper who allows his controlled hybrid queens to supersede will, of course, soon have variable stock similar to the present run of bees.

The rate of progress will be limited by the number of persons skilled in the technique of artificial insemination and by the facilities for the selection of parental lines, the testing of progeny, and the production and maintenance of breeding stocks. The judgment of persons engaged in bee breeding, plus a knowledge of genetics, principle of breeding, and of bees themselves, is equally important.

When superior stock becomes

available, beekeeping practices will have to be geared to the needs of highly productive colonies. The need for control over environment affecting the physical development of queens produced from breeding lines has been recognized in the testing program from Madison. A queen of superior stock reared under poor conditions may be less productive than a queen of ordinary stock reared under favorable conditions. Conversely, stock of known genetic constitution is equally essential before queen-rearing methods can be truly evaluated.

Anticipating the immediate opportunities in bee breeding, Mackensen and Roberts (3) have prepared a manual on artificial insemination and the handling of breeding stock. Other important publications relating to the development of artificial insemination and its application to bee breeding are listed in the accompanying bibliography.

\*\* The Department of Economic Entomology of the College of Agriculture, University of Wisconsin, has arranged to have the Roberts and Mackensen apparatus for the artificial insemination of queen bees produced for sale to institutions or individuals throughout the world as a service to the industry.

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# Legumes and Legume Problems in the Northeast

By Gilbert H. Ahlgren\*

**L**EGUMES are the very foundation of northeastern agriculture. In this region vast areas are devoted to the growing of hay and pasture crops while lesser areas are sown to soybeans, field peas, field beans or cowpeas. In addition erosion is considered a serious problem and more crops including winter vetch and crimson clover are utilized in combating this menace.

The most important hay crop in the Northeast is red clover and timothy. Alfalfa is second in importance while lesser quantities of alsike clover, sweet clover and bird's-foot trefoil are grown.

Of the pasture legumes Ladino clover reigns superior. It is by far the most important pasture legume now grown in this area. Also highly important, but rapidly losing popularity with northeastern dairymen, is the so-called wild white clover. This clover nevertheless inhabits a wide expanse of our native and natural pasture regions and probably will continue to do so for many years to come.

A major problem in the Northeast is that of securing seed of adapted varieties of legumes. For the most part, we are a seed consuming region and not a producing one. We are dependent on midwestern or western growers of small seeded legumes for practically the entire quantity needed to maintain our hay, pasture and soil conserving crops.

There are approximately 1½ million acres of alfalfa grown here annually. Because of various adverse conditions and lack of suitable varieties, we are forced to renew this acreage approximately every third year. Since alfalfa is usually grown with a grass partner, our seed requirements per acre for planting is

about 10 pounds on an every third year basis. This means the northeastern region consumes 5 million pounds of alfalfa seed annually.

We also grow between 8 and 10 million acres of red clover and timothy mixed. This crop must be renewed every year or every second year. For its renewal we need approximately 50 million pounds of red clover seed annually.

There are also about 18 million acres of pasture land. Much of this is hilly erodible and cannot be plowed. Nevertheless, several hundred thousand pounds of Ladino and white clover seed are consumed each year for the establishment of better pasture crops.

Thus we have sown in the Northeast from 30 to 40 million dollars worth of legume seeds annually. This is a large bill which our farmers must meet and often they are forced to pay for a product that is not thoroughly reliable, since essentially no specific legume varieties excepting Atlantic alfalfa have been bred for use in this region.

The Atlantic alfalfa was developed by the New Jersey Agricultural Experiment Station. In tests over a period of 8 years this variety has consistently outyielded all others tried in that state. Other alfalfa varieties have a degree of superiority also and thus in New Jersey the northern variegated types and Kansas Common have proved to be fairly good varieties. The new Buffalo variety has some markedly outstanding characters such as apparent resistance to aphids and alfalfa wilt. Certain of the red clover varieties have proved superior in New Jersey tests as they have in other states of this region.

Ladino clover which is simply a giant form of white, is undoubtedly the most superior pasture legume yet discovered but even now there is danger of some of its superiority being lost due to crossing with the

wild white clover which exists over a good part of the humid northeastern pasture region. Ways and means of maintaining the purity and the superiority of Ladino must be found in the near future. It is doubtful that we here in the Northeast are in a position to produce seed supplies of Ladino if for no other reason than this item of purity maintenance. White clover abounds throughout the Northeast in every pastured field, along the roadsides and on the home lawn. The danger of crossing with Ladino is great.

While the New Jersey Experiment Station succeeded in producing Atlantic alfalfa many problems were met when it came to propagate seed supplies. The Station has maintained a foundation field of Atlantic at New Brunswick in order to secure pure seed. As this seed has been harvested we have sent it to several of the western states for the production of so-called registered seed. This has all been done through the Field Crop Improvement Association in New Jersey and also the Utah Field Crop Improvement Association in the West. The registered seed produced in Utah is again replanted by qualified growers and from this crop certified seed is obtained. This is the seed returned to the East for consumption in planting of Atlantic alfalfa here. The methods and techniques employed are time-consuming and tend to increase the cost of such seed to the consumer. We would like, if possible, to produce this seed in the Northeast but experience dictates otherwise.

During the past six or seven years we have harvested seed from our Atlantic alfalfa field regularly. During some years we have received well over 100 pounds of this seed per acre, whereas during other seasons four or five pounds of seed only has been produced per acre. We have tried using first as compared to the second

\*Head of the Farm Crops Department, Rutgers University, New Brunswick, N. J. Presented at Annual Pollination Conference, Amherst, Massachusetts.

crop for seed. None of these experiments have placed seed production of Atlantic alfalfa on a sound or economical basis. It may be that the broader use of bees to improve pollination would have been helpful.

At the moment we are very much inclined to feel that climate is a major influence in seed set on alfalfa in New Jersey. During the hot dry years good seed production has resulted; on the other hand wet and cool seasons have produced almost negligible quantities of seed.

Even if it were possible for us to secure fairly good seed production on a constant basis there are certain other farm problems that would have to be met by northeastern farmers. There is the economic pressure that exerts itself on most land holders in this region. Taxes are high. The soil is plentiful but not fertile and so lime and fertilizer must be applied, and there is the ever present competition from other crops and other methods of farming.

Northeastern farmers lack the know-how for the production of small seeded legumes. Since this is, in general, a dairy farming region, crops and machinery have been developed around this type of farming. The use of the combine and other machines for the harvesting of small seeded legumes is not common here and few farmers know the tricks of the trade. In addition, machinery is not often at hand for our growers to aid in the production of this type of seed. It appears therefore, at the moment, that this is a region of hay and pasture production and that seed will be relegated to the background unless broad steps forward can be taken.

New Jersey.

## A Man and His Bees

Published in London by Sedgwick & Jackson, comes a little 12 mo, 156 page book entitled, "A Man and His Bees," by H. J. Lund. It is a delightful reading little book about the beekeeper starting in with his bees, his various problems and mistakes and enjoyable times spent with the bees, handling them and observing their activities.

All in all, while not in any way a textbook on beekeeping, it is quite instructive particularly for the beginner, and outlines many of the mistakes which might be avoided but which the author apparently had to

overcome in the course of his beginning efforts.

## Have You Filed For Sugar Tax Refund?

Many of our subscribers are feeding or have fed quantities of sugar to their bees. They failed to recognize the importance of filing a claim with the nearest Internal Revenue Collector for the tax paid on such sugar. According to the regulation it is possible to claim the tax when used as livestock feed and a bee feeder is so considered. A half cent a pound on 10,000 pounds fed means \$50.00.

We have prepared duplicate forms giving explanation of what is to be done. In the meantime write your nearest Internal Revenue Collector for two copies of Form No. 843. All claims should be filed within a year of the date the sugar is fed. Write the American Bee Journal for sample forms and method of procedure.

## Honey and Beeswax in '47

The government preliminary report on production of honey and beeswax in the U. S. A. in 1947 shows a total of slightly in excess of 228,000,000 pounds of honey produced which is 7% increase over the 1946 figures and 13% above the 1941-45 average.

The chief reason for the additional production was increases in the north Atlantic and west north Atlantic states and particularly a large crop of fall honey in the central western areas where heartsease is produced and in the buckwheat areas.

Records show mid-December stocks as 62,000,000 pounds compared with 11,000,000 last year.

From reports coming in from beekeepers even the 62,000,000 pounds looks small. However, the bulk of the carry-over is in the amber producing areas of the central West immediately surrounding the place of publication of this magazine.

Iowa is reported as highest producer with an excess of 6,000,000 pounds with California and Minnesota close behind. Other high producing areas in number of pounds are New York, Idaho, Nebraska, Michigan, Wisconsin and Illinois.

Slow movement of crop is ascribed to plentifulness of sugar and slowness of beekeepers to accept lower prices.

Beeswax production is reported at 4,492,000 pounds or about 3% over 1946.

## Iowa Short Course Ames, May 11-12

The annual Short Course for beekeepers will be held at Ames on May 11-12. The first day will be devoted to beginners' problems and the second day to the problems of commercial producers. Complete details will be available not later than May 1.

F. B. Paddock,  
Extension Apiarist.

## National Federation Resolutions

Continued from March Issue.

### Resolution No. 10

The U. S. Department of Agriculture was requested to conduct additional and intensified research regarding the effect of agricultural chemicals on honey bees and other beneficial life.

### Resolution No. 11

The secretaries of Agriculture and Commerce were requested to include in proposed legislation adequate provisions to insure for the beekeeping industry the substantial quantities of tin needed for packing honey and for shipping package bees.

### Resolution No. 12

A resolution concerning Nosema disease by the Southern States Beekeeping Federation was adopted as an official act of the National Federation meeting.

### Resolution No. 13

Since the price of domestic honey is falling and labor and material costs are now at a prohibitive level and still on the increase, the National Federation requested that the duty on importation of foreign honey be increased to an equitable price between the cost of domestic honey and the price F. O. B. on foreign honey.

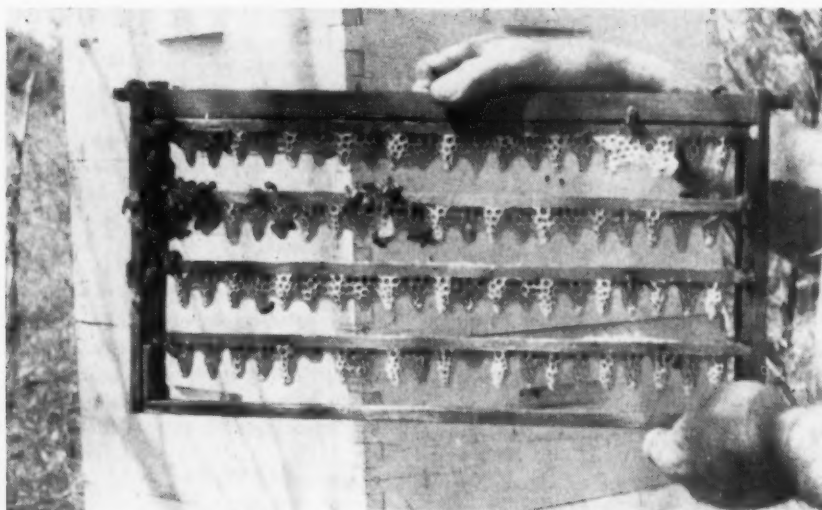
### Resolution No. 14

The National Federation expresses sincere appreciation to the following: The management and employees of Hotel Utah; the Latter Day Saints Church; President Smith of the Church; the Utah State Beekeepers' Association; Hon. Tracy R. Welling, Commissioner of Agriculture of the state of Utah; Director W. W. Owen, of the Extension Service of Utah State Agricultural College; and to all others who have contributed to making our meeting a successful one.

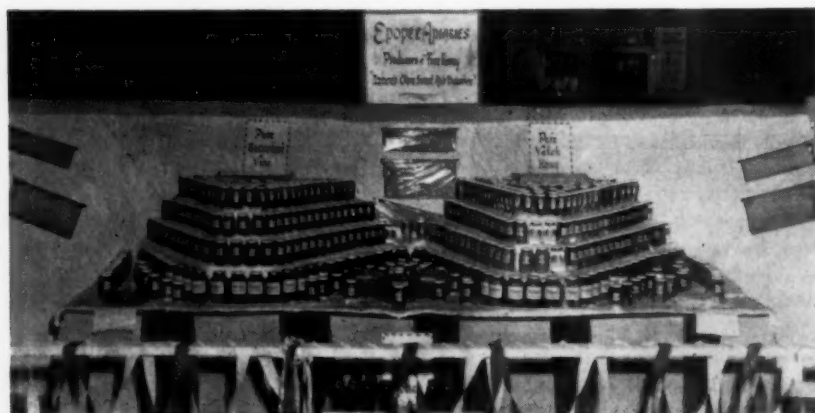




John W. Shorter, presiding at New Jersey Convention (left), and Dr. E. J. Dyce, Cornell University, examine a brood comb for disease. Dr. Dyce addressed the Garden State beekeepers on bee poisoning problem and apiary management. (From New Jersey State Department of Agriculture, Trenton).



Commercial queen rearing depends on mass production and Charles Engle, of Texas and Minnesota, holds a frame of queen cells that would be the envy of any commercial queen breeder.



Irvin Trevathan, who started his Epopee Apiaries in 1923, won first place in the Northeast Agricultural District Fair, at Blytheville, Arkansas. Trevathan has lost many colonies in the past few years from cotton dusting. He can tell you that beekeeping is a struggle in such a location.

## About Package Bees

Now that we are looking forward to spring, many have questions on the installing of package bees. The most difficult problem with packages is the supersedure of queens.

My experience is that early release of the queen from the cage and heavy feeding will prevent this to a great extent. Unless the direct release method is to be used, feeding bees through the screen is a waste of time. Simply open the cage and release the bees. Brush bees off the queen cage and see if the queen is all right. If so, remove the zinc or wire screen from the candy end of the queen cage and push a nail through the candy to help hasten her release.

Use a ten-pound, friction-top pail in feeding with about 40 small holes punched in the lid so as to let out plenty of sirup. The bees must be fed heavily.

If the queen has not been released in 36 hours, release her. The bees will not ball her provided the frames are not disturbed for at least 6 days after the release of the queen. To release the queen simply pick up the queen cage, pry off the zinc at one end and lay the cage back on top of the frames. Close up the hive and do not disturb for at least six days.

To prevent the swarming out of the bees upon release of the queen, place a queen excluder between the bottom board and the hive body. Do not worry about drifting. Several packages installed close together will work out well, even if the bees are released about 10 A. M. The bees will spend the first day marking their location.

By this method there should be eggs and brood and the colony well established after a week has passed. Be sure to feed at least two ten-pound pails of sirup, and more if the bees will take it.

Julius Lysne,  
Wisconsin.

## Perspiration Preventive

An aid to beekeepers who must use glasses in their work is a solution of 25% aluminum chloride. This should be applied to the forehead regularly and will help overcome the trouble of moist glasses. Any druggist can mix up such a solution.

E. F. Bea,  
Minnesota.

## Bee Breeders Form Association

Some seventy breeders of bees and queens assembled at Meridian, Mississippi, on February 9 to form the American Bee Breeders Association. It was an enthusiastic meeting which elected as its first officers, E. C. Bessonnet of Donaldsonville, Louisiana as president; Paul Cutts, of Chipley, Florida, as vice-president; and J. F. McVay, of Jackson, Alabama, as secretary. The board of directors consists of H. Babcock, Columbia, South Carolina; Nevin Weaver of Navasota, Texas; M. S. Fortune, of Mayhew, Mississippi and J. H. Girardeau, of Tifton, Georgia.

The immediate plans are to complete organization, promulgate rules and regulations governing producing, preparing and shipping queens and package bees which are to be agreed to before breeders may become members and before they may use in their stationery and other advertising, the emblem of the Association now in process of preparation. The dues of the Association are set at \$5.00.

The directors are to formulate as rapidly as possible plans by which breeders may participate in raising and making available, better breeding stock. The meeting was a very enthusiastic one. The Southern Beekeeper was selected as the official organ of the Association.



What water will do! A subscriber sends this picture of bee hives toppled and sodden with flood waters. Lucky the one whose hives and equipment are not swept away entirely.



The garden chive, a form of onion, flavors soups and delights with its lavender flowers. It is hardy and requires little care. Many kinds of onions are attractive to bees.

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## Arizona Bulletin No. 207

University of Arizona Bulletin No. 207, dated June 1947, deals with "Beekeeping Near Cotton Fields Dusted With DDT." The experiment for such growers was carried out by S. E. McGregor and C. T. Vorhies.

Results would indicate that treatments of large cotton acreage by airplane with insecticidal dust containing 10 per cent DDT in pyrophyllite at 15 pounds per acre, 5 per cent DDT in sulfur at 20 pounds per acre, or a spray containing 1½ to 3 pounds of DDT dissolved in xylene per acre are not hazardous to commercial beekeeping.

However, apparently with such applications bees are apt to visit the cotton more intermittently and there is a small percentage of loss of adult bees.



Beauty Bush (*Kolkwitzia amabilis*) from China. Grows six to ten feet and spreads about as far. Has a wonderful show of flowers. A well grown bush will have thousands of flowers which attract butterflies, hummingbirds and numerous insects besides honeybees.

## In Memory of a Great Leader

(Continued from page 196)

large the Davis Memorial Carillon he went to Europe to negotiate for some of the best old bells of Belgium. He was there when war was declared and had a treacherous trip home. The bells were moved out of Belgium and buried in a neutral country before the Germans could get hold of them for making into bullets.

After receiving his degree from Cornell and again becoming established at Alfred, nothing lured him away. Those who have been there can understand why. This little community scattered along a winding road up a valley, with its small University, its carillon, its quaint old shops, and its winding stream, has a quiet charm few places can boast. Those who have been there to enjoy the unsurpassed hospitality of the Watson home, considered Dr. Watson an integral part of it. To them it can never be the same.

Otto Mackensen,  
Baton Rouge,  
Louisiana.

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THE contributions of Dr. Watson to beekeeping will long be remembered. Although beekeepers have tried for centuries to mate queens artificially, and a few were more or less successful, credit goes to Dr. Watson for making instrumental insemination a reality. This statement might be objectionable to Dr. Watson himself because he did not claim originality for the application of the principle and he objected to the use of the word "artificial." He preferred the term "instrumental insemination." He revived an old idea and developed it, describing his technique in sufficient detail to permit others to learn from his experiences.

His description of the insemination technique of 1926 is outdated today. We have every reason to believe the technique of 1948 will also be outdated in a few years. Nevertheless, it would be wise for anyone interested in bee breeding to read Dr. Watson's book, "The Controlled Mating of Queen Bees." His Chapter VII is certainly not outdated and as a tribute to him I would like to see those three pages republished. (This will be done—Ed.) There is so much good in it and so little to criticize

that it is appropriate to remind us again of his work and thinking.

W. C. Roberts,  
Madison,  
Wisconsin.

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LLOYD Watson's interest in bees stems back to boyhood experiences when maple sugar and honey were regular crops on the Watson dairy farm in western New York State. The making of hives, frames, and sections encouraged an early familiarity with the use of tools which later bore fruit in the making of artistic furnishings for his home and finally in the making of precision instruments for inseminating queen bees. Thus was laid a sure foundation for the life work and the outstanding contribution of our esteemed friend and colleague.

Watson might never have been heard of in the beekeeping world however had it not been for experience in the care of poultry. During the period 1906-1909, he did some caponizing and he attempted artificial insemination on fowls with enough success to build up a flock of limited size solely by this procedure. Since it worked with hens, why not with bees?

Recognizing that marked improvement was impossible so long as mating control remained elusive, the ambition to solve that baffling problem grew until it became little short of an obsession. In his long and untiring pursuit of this worthy objective, he was constantly aided and abetted by his capable and staunchly loyal wife.

While working towards a Ph. D. degree at Cornell, he made known to the Dean of the graduate school his deep-seated desire to work on the genetics of the honey bee for his thesis problem. To this the Dean replied that, since mating in the honey bee could not be controlled, such a problem would be incapable of solution. Watson's ready answer was: "I'll find a way to control mating," to which the Dean rejoined: "Watson, you're an incorrigible optimist!" When finally Watson was able to demonstrate his technique to the satisfaction of a committee from the Graduate School, the Dean, with tears in his eyes, offered him hearty congratulations and remarked: "I'm glad others have been more helpful to you than I was."

On the basis of this demonstration and other evidence of success in con-

trolling mating in the honey bee, the degree, Doctor of Philosophy, was conferred in the spring of 1927. Subsequently Dr. Watson demonstrated his methods before various interested groups, among which should be mentioned an Interstate Beekeeper's meeting at Hamilton, Ill., in August of that same year. Several hundred beekeepers and a number of research workers gathered there primarily to see demonstrated this epoch-making technique.\*

Dr. Watson strove faithfully—and not without some well-deserved success—to devise improved instruments and methods. Within his last hour (he little suspected it would be his last) his conversation dwelt upon the making of a new microsyringe which he had completed the previous day, and upon some strictly new ideas he had for stock improvement in honey bees.

Well-known research workers in far corners of the world besought him to supply them with the instruments and instructions for performing this operation. Dr. Watson gave freely of his time and experience to instruct those interested in learning his methods and went to great lengths to accommodate all who applied, often at considerable expense to himself.

As a result of his generosity in sharing all his studies and achievements in this field, it is to be expected that the goal of stock improvement he had set for himself will be reached by others in the not-far-distant future. Various workers who have used Dr. Watson's work for a springboard, already have made important contributions, and I venture to say that the impetus to stock improvement in honey bees given by Dr. Watson's tireless efforts will not subside short of outstanding success.

Dr. O. W. Park,  
Iowa State College,  
Ames, Iowa.

\*\*\*\*\*

THE beekeeping industry lost one of its most prominent research workers with the sudden death of Dr. Lloyd Watson on February 26, 1948. Dr. Watson is best known for his development of a method of artificial insemination of queen bees which incorporated the use of a microsyringe of his own design. He was the first to demonstrate convincingly that artificial insemination of queen bees is possible, and the extent to which his method of insem-



ination has been adopted by research workers in almost every civilized country in the world is a measure of the value of his achievement.

Dr. Watson's ability as a research worker received widespread recognition and was rewarded by various grants from research foundations. While at Cornell he held the August Heckscher Foundation Research assistantship. In 1936 he became a Guggenheim Memorial Foundation Fellow, and in 1941 he was awarded a grant by the American Academy of Arts and Sciences. Later his work received the recognition of the American Philosophical Society which made funds available to him for further research.

A feat of academic interest performed by Dr. Watson was the transfer of semen from the spermatheca of a laying queen to the reproductive tract of a virgin queen which resulted in the insemination of the virgin. One phase of his research that is less well known by beekeepers was his development of a method to detect the adulteration of beeswax with carnauba wax. This method has been included in the 22nd Centennial Edition of the United State Dispensatory.

Dr. Watson leaves his widow, Olive Sherman Watson, and two sons, Huber, of the Eastman Kodak Company in Rochester, and Lloyd Sherman Watson a graduate student in biochemistry at the University of Wisconsin.

Dr. Harry Laidlaw,  
University of California,  
Davis, California.

\*Description of technique and results of his work were published in 1927 in a 50-page book, "Controlled Mating of Queenbees," and two years later, "New Contributions to the Technique of Instrumental Insemination of Queenbees" appeared in the Journal of Economic Entomology.

## Illinois Annual Convention

Arrangements have been made to accommodate the 1948 Annual Convention of the Illinois Association at the St. Nicholas Hotel, Springfield, the 12th and 13th of November.

Hoyt Taylor, Secretary.

## B. C. Central Executive

The annual meeting of the British Columbia Honey Producers' Association, Central Executive, will be held in the City Hall, Kamloops, B. C., at 10 A. M., May 8.

W. H. Turnbull,  
Provincial Apiarist.

## Italian Package Bees and Queens For 1948

Quantity	1-29	30-98	99 & over
2-lbs. with queen	\$4.30	\$4.15	\$4.00
3-lbs with queen	5.30	5.15	5.00
Extra queens	1.35	1.30	1.25

For queenless packages deduct the price of the queen

Package prices are F. O. B. Tifton, Georgia. Queens only are postpaid

Terms: \$1.00 deposit per package when the order is booked and the remainder is due 10 days prior to shipping. Cancellations are in order at any time prior to shipping and deposits will be promptly returned.

**GIRARDEAU APIARIES**  
TIFTON, GEORGIA

## ROOT SERVICE from Chicago in Nineteen Forty-eight

Plan ahead. Order early the supplies you will need. We will try to have them for you.

### BEEKEEPERS' SUPPLIES

Root Quality—the best hives, supers, frames, sections, foundation, all equipment, bees and literature.

### HONEY CONTAINERS

Glass and Tin—best makes, jars, cans, pails, all standard sizes.

### BEESWAX

Good average and light yellow. We want it—highest market prices—Cash or trade.

ASK FOR OUR BEE-SUPPLY PRICE LIST.

ASK FOR OUR CONTAINER PRICE LIST.

A. I. ROOT CO. of Chicago 224 W. Huron St., CHICAGO, ILL

## YORK'S Package Bees and Queens For 1948 QUALITY BRED ITALIANS

THE STRAIN PREFERRED BY LEADING HONEY PRODUCERS

Booking orders for May and later shipping, booked full for April.

### PACKAGE BEES WITH QUEENS

Quantity	1 to 2	3 to 27	30 to 99	102-up
2-lb. packages	\$4.65 each	\$4.50 each	\$4.25 each	\$4.00 each
3-lb. packages	5.85 each	5.65 each	5.40 each	1.35 each
Extra queens	1.50 each	1.45 each	1.40 each	5.15 each

Queenless packages, deduct \$1.15 per package

If convenient, small orders cash, larger orders \$1.00 deposit per package, balance not less than two weeks prior to shipping date.

**YORK BEE COMPANY ; Jesup, Ga., U. S. A.**  
(THE UNIVERSAL APIARIES)

## Ideal to Start On This Spring State Inspected Dovetailed Hives and Supers

WELL PAINTED

2,000 Modified Dadant hives, drawn combs, Dadant wired foundation .....	\$6.50 each
6,000 Modified Dadant supers, 10 drawn combs on Dadant wired foundation .....	2.50 each
1, 3-lb. package Italian bees with young queen .....	5.65
	<b>\$14.65</b>

Hives have pollen and honey enough to install packages. Hives and supers in Northern Minnesota. If you are interested in starting or increasing your unit, WRITE US.

**Tanquary Honey Farms, Inc.**  
**Lena, South Carolina**

## Italian Package Bees & Queens For 1948

FOR CHOICE SHIPPING DATES PLACE YOUR ORDER NOW  
EACH PACKAGE WITH YOUNG LAYING QUEEN

	1-24	25-49	50-99	100-up
3-lb. ....	\$5.50	\$5.35	\$5.20	\$5.00
2-lb. ....	4.50	4.35	4.20	4.00

Extra Queens \$1.25 Each

Send \$1.00 per package deposit to book your order and hold shipping date. Balance due 10 days before shipment is made. Deposits promptly refunded if order is cancelled. Live delivery guaranteed. Health certificate with each order. Packages are shipped Express Collect.

Quality does not cost—it pays

## The Wilbanks Apiaries

WARREN WILBANKS, Manager

CLAXTON, GEORGIA

## 1948 is the BIG QUESTION

The beekeeper may be caught between high production costs and low crop returns. It will be necessary to increase efficiency of production. Good stock will pay big dividends. A reserve of queens will be essential. The Association's DR stock will help you with your production problems this year. Open dates available for prompt shipment.

## IOWA BEEKEEPERS' ASSOCIATION

STATE HOUSE

DES MOINES, IOWA

**Renew Your Subscription NOW**

## Italian Bees and Queens

WICHT APIARIES

406 Miller St., Hattiesburg, Mississippi

## Palmetto Quality Queens

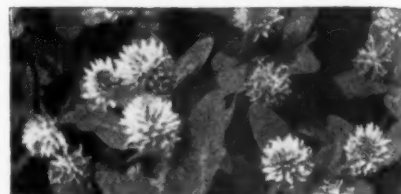
We hope to give you the best queens possible for the season 1948. We breed Three-Band Italians only. Our prices are 1 to 5, Queens \$1.10 each. 5 to 10, \$1.05 each. 10 or more \$1.00 each. Your business will be appreciated.

**C. G. Ellison & Sons**

BELTON, SOUTH CAROLINA

## Pellett Clover

START WITH LIVE PLANTS



Spreads rapidly from deep roots and increases from year to year. Blooms in June and July. Very attractive to bees. Root divisions may be planted in spring. Orders for delivery now. Root divisions—25, \$2.00; 100, \$5.00; 250, \$10.00; 500, \$18.00 postpaid.

## MELVIN PELLETT

ATLANTIC, IOWA

## Italian Package Bees & Queens

5,000 queens for May and June delivery—\$1.00 each.

1,000 four frame nuclei in any quantity desired. Each nuc equivalent to two-pound package. Buyer may furnish own boxes.

**F. E. MORRISON**

Rt. 2, Box 103

Auburn, Calif.

## Italian Package Bees With Queens

	1 to 12	13 to 49	50-up
3-lb. package	\$5.25	\$5.00	\$4.90

**J. R. N. HARBER**

BOX 381

ALMA, GEORGIA

## Honey Institute

This spring marks the beginning of a new program of Honey promotion. Honey advertising is appearing in professional journals of nation-wide circulation.

The first of these advertisements appeared in the March issue of **What's New in Home Economics**. This month, Honey is being advertised in **Hygeia**, **The Health Magazine**, and again in **What's New in Home Economics**. In May, there will be Honey advertisements again in these two magazines, and also in three others: **Journal of the American Dietetic Association**, **Journal of Home Economics**, and **Forecast for Home Economists**.

These ads are carefully designed and written to appeal to those who read these magazines. They play up the nutritional and energy-building aspects of Honey in which these people are especially interested.

The readers of these professional magazines can influence the food-buying habits of the nation's home-makers. It is to the advantage of the Honey Industry to interest them in Honey.

A well-organized, continuous advertising program, backed financially and morally by the entire industry and carried out by an able and experienced organization, can develop a wider market for honey than ever before.

\*\*\*\*\*

New services are being planned by the Institute to tie in with this advertising program. You will want to take advantage of all of them.

Honey display signs for use in stores will soon be available. Printed in four bright colors on sturdy cardboard, with space for your own imprinting, they will attract attention to your Honey and bring in more Honey sales.

Single display cards will sell at 25c each, with special prices on orders of 10 or more.

Mats for newspaper advertising of Honey are being designed. Honey sellers can purchase them from the Institute (at cost) and insert them in their local papers, each one entering his own name and honey price.

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If sufficient funds are available, photographic mats of honey foods will be offered to food editors. These will be coordinated for use with the releases regularly sent to newspapers.

\*\*\*\*\*

All these new activities require a sound financial backing. Those who want to see an effective, successful advertising program for honey are urgently needed now to stand behind the American Honey Institute and its expanded program. Join the Institute today.

\*\*\*\*\*

Letters in praise of the attractive 56-page book, **NEW FAVORITE HONEY RECIPES**, continue to form a heavy part of the Institute's daily mail. Here is one from an English friend:

"I wish to send you sincere thanks for the copy of **NEW FAVORITE HONEY RECIPES** I have received.

"Here, it is admired by all that have seen it. You have good cause to be proud of your advertising power (and printing industry, too)."

\*\*\*\*\*

A recent issue of a national baking trade magazine carried a formula for Honey Pecan Buns, and also a two-page advertisement by the makers of a special shortening for bakers, which featured the "best-seller" cake of the month—Honey Graham Cracker Banana Cake.

\*\*\*\*\*

Cooking in George Washington's time was no easy task, according to a recent newspaper article. In spite of awkward equipment, however,

many delicious and unusual recipes were developed and handed down. The writer of this article selected Martha Washington's recipe for Honey of Roses as one of the most unusual:

"Bring one pint of honey to boil and remove any scum. Add one pint of red rose leaves. Boil in double boiler for half an hour. Let stand for 10 minutes and strain. When cool it is ready for use."

\*\*\*\*\*

The new **Honey for Breakfast** leaflets are proving very popular. Orders are coming in from the many beekeepers who recognize the value of this excellent idea for year-around honey promotion. "Honey for Breakfast" is a slogan that is bound to get attention. It sounds good; it is good. Honey for Breakfast should be a national habit—the new leaflets can help make it grow. Write today for your free sample of these attractive Honey for Breakfast leaflets. Plan to distribute some to your customers. They will buy more honey when they serve plenty of Honey for Breakfast.

\*\*\*\*\*

There has been a lot of good publicity for Honey for Breakfast promotion.

One advertising company recently sent a Honey for Breakfast mat to 500 leading newspapers, free of charge to the Institute.

The United States Commerce Department has compiled a list of special events to be observed in 1948. **HONEY FOR BREAKFAST WEEK** and **NATIONAL HONEY WEEK** are both included.

Advertising departments will find this pamphlet a big help in building coordinated advertising programs. Newspapers and magazines are calling attention to this fact, and several have selected **HONEY FOR BREAKFAST WEEK** for special mention.



## ITALIAN QUEENS . . . BEES

Line bred since 1927. Queens raised from stock of 200 to 300 lbs. after pulling bees all spring up into July. Queens mated to drones from similar selection.

9,000 Queens—1,000 Four Frames Nucs, each \$7.00. Bring your hives and get them, or send hives for shipment for May 15th delivery.

	Queens	2-lb.	3-lb.	
1-24	\$1.40	\$4.50	\$5.65	LARGER LOTS, WRITE
25-50	1.30	4.25	5.45	FOR PRICES

HOMER W. RICHARD : GOULD, ARK.

## It's a Good Idea

This time of year to gather up all your old comb and cappings and have them rendered into beeswax before the wax moths consume any part of it. We charge only 2 cents a lb. for rendering when your old comb or cappings weigh 100 lbs. or more (net), 3 cents on smaller shipments. We are buying clean beeswax today at 43 cents a lb. delivered.

We are always buying honey. Send SAMPLE, state how much you have and quote your best price. We remit promptly for honey or wax shipments.

Send for our money saving price list on bee supplies.

## The Fred W. Muth Co.

229 Walnut Street

Cincinnati 2, Ohio

## Packages BESSONET'S Italian Queens

GOOD ITALIAN STOCK bred for production. Rush us your order for some of the good dates we have to offer. Prices:

Quantity	Queens	2-lb. Pkg.	3-lb. Pkg.
1-24	\$1.40	\$4.50	\$5.85
25-99	1.30	4.25	5.55
100-Up	1.20	4.00	5.25

BESSONET BEE COMPANY : Donaldsonville, La.

## ITALIAN BEES AND QUEENS

Package bees headed by our own strain of Italian queens which we have bred up in the past six years from disease resistant stock. EVENLY MARKED—GENTLE—REAL HONEY GATHERERS.

	Queens	2-lb.	3-lb.	4-lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20
25-99	1.30	4.25	5.50	6.85
100-up	1.20	4.00	5.25	6.50

Queenless package deduct price of queen.

LUCEDALE APIARIES

LUCEDALE, MISS.

## QUEENS Fall Queens a Specialty QUEENS You send the order; I have the queens

LEATHER COLORED ITALIAN QUEENS  
MIDDLE TENNESSEE APIARIES

1 to 25, \$1.35; 26 and up, \$1.20—From Imported Strains. 1/4 books orders. Balance before shipping. All queens clipped and by air mail at no extra cost. (All queens after June 15, \$1.00)

J. B. TATE & SON

1029 No. 4th St., Nashville 7, Tenn.

Telephone No. 34509M

## Package

## Bees and Queens

	Queens	2-lb.	3-lb.
1-24	\$1.35	\$4.25	\$5.25
25-50	1.25	4.00	5.00

No deposit required until March 1st.

Hopkins Honey Farms

MARINGOUIN, LOUISIANA

## HEADQUARTERS

FOR

## Cut Comb Packages

ALSO

## Bulk Comb Frames

with 1 1/4" or 1 1/2" ENDS and TENSION SPLIT TOP BARS for rapid and positive insertion of foundation.

Send 15c in stamps for sample frame postpaid. Write for prices.

M. J. BECK CO.

BOX 7

LANSING 1, MICH.

## QUEENS QUEENS and Package Bees

2-lb. with queen \$4.50  
3-lb. with queen \$5.50  
Additional pounds bees \$1.00 per lb.

## UNTESTED QUEENS

1 to 25 \$1.25 each  
25 to 50 1.20 each  
50 up 1.15 each  
All bees shipped in new cages. Certificate with every order.

Alamance Bee Co.

Geo. E. Curtis, Mgr.

GRAHAM, NORTH CAROLINA

## MANY THANKS

Please send no more package orders for 1948.

Can accept queen orders for shipment after May 20th.

## ITALIANS CAUCASIANS

Weaver Apiaries  
Navasota, Texas

Patronize Our Advertisers

# PREVIEWS

## OF COMING EVENTS

### **Bronx County (N. Y.) April 11**

The Bronx County Association will hold its next regular meeting at the home of Frank Glazer, 3424 Gates Place, Bronx, N. Y., Sunday, April 11, at 2:30 P. M. Refreshments will be served.

Sam Roberts, Sec'y.

### **Minnesota Valley (Minn.)—North Mankato—April 10**

We are going to have our Minnesota Valley Association meeting on April 10th, in the Century Club, across the bridge in North Mankato.

Frank Finn, Sec.-Treas.

### **Worcester County (Mass.)—April 17**

The Worcester County Beekeepers' Association will hold its April meeting on April 17th, at 6:30 P. M., with a bean supper at the Worcester Natural History Museum. Peter Archibald, Vice-President of the Middlesex County Association will speak.

Eugene Trainor,  
Publicity Director.

### **Western Missouri Association— Kansas City, April 11**

The Western Missouri Association will hold its next meeting the second Sunday in April, April 11th, at 2:30 P. M., on the 25th floor of the City Hall in Kansas City, 12th and Oak Streets. Subjects: "Transferring Bees to Modern Hives from Houses, Trees, Box Hives and Similar Places" by Byron Smith, vice-president of the Missouri Beekeepers' Association; and "Raising Queens" by Guy Diemer, queen breeder, both speakers from Liberty.

Mrs. H. J. Schaffer, Sec'y.  
Frank E. McLaughlin, Pres.

### **Missouri Short Course—Columbia— April 22**

A short course for beekeepers, sponsored by the Missouri State Beekeepers' Association will be given at the University of Missouri, Thursday, April 22, in Mumford Hall. Following is the list of speakers: W. F.

Matthes, L. F. Childers, Carlton Wright, Edgar Stewart, George C. Nagel, State Entomologist Lloyd Adams, Dr. V. G. Milum, Glen O. Jones of the Federation, Dr. James I. Hambleton, U.S.D.A., G. H. Cale of American Bee Journal. A printed program will be sent to association members and others. Program starts at 9:30 A. M.

George D. Jones,  
University of Missouri.

### **Clark County (Ohio)—Springfield— April 13**

The Clark County (Ohio) Association will have a meeting in the assembly room of the Clark County Court House basement, Springfield, at 8 P. M., Tuesday, April 13. Special subject, pollination problems. Charles Reese, Ohio State University, will show interesting slides.

H. R. Swisher, Sec'y.

### **Cook-DuPage (Ill.)—April 17— Chicago**

The Cook-DuPage Association will hold its next meeting Saturday evening, April 17, at the Paul Revere Field House 2509 W. Irving Park, Chicago, at 7:30 P. M.

A. J. Smith, Sec'y.

### **Northern New York—April 17— Canton**

The spring meeting of the Northern New York Beekeepers' Association will be held on April 17 in the Masonic Hall in Canton, N. Y.

Maurice Dewey, Sec.

### **Iowa Radio Discussions Start April 5**

The annual series of radio discussions for Iowa beekeepers will start again on Monday, April 5, over WOI, 640, at Ames. It is a part of the morning Farm Facts program and will come at about 6:50 A. M.

### **Westchester County (N. Y.)—New Rochelle—April 18**

The Westchester County, New York, Association will hold their

regular monthly meeting at 2:30 P. M., Sunday, April 18, at the Odd Fellows Hall, 20 Lockwood Ave., New Rochelle. A social hour with refreshments will follow the meeting.

B. F. Miller, Publicity.

### **Morris County (N. J.)—April 3— Morristown**

The annual meeting of the Morris County Association, a branch of the New Jersey Association, will occur April 3, 8 P. M., in the Grand Jury Room of the Court House, Morristown. There will be an election of officers. Dr. Robert S. Filmer, Professor of Entomology, Rutgers University, will show and discuss his colored slide collection of honey plants and flowers. Paul Holcomb, state inspector, will review wintering and spring prospects.

G. A. Downsborough,  
Secretary-Treasurer.

### **Harris County (Texas) First of Month**

Meetings of the newly organized Harris County Beekeepers Association, in Texas, will be held the first of each month. The officers of the group are Thomas R. Phelps, 1010 Post Street, Houston, president; Burton R. Flake, 7544 Elm Street, Houston, vice-president; O. O. Lynn, 414 Lamar, Houston, secretary-treasurer.

### **R. L. Bernell**

R. L. Bernell, of New Orleans, passed away on February 8. When I first came to the South twelve years ago, I noticed Mr. Bernell's bee yard on Gentilly Highway as I passed going into New Orleans and stopped to visit, discovering a very friendly man, sincerely interested in bees. A short time thereafter we were to become neighbors, my location being about forty miles from Mr. Bernell's. His ethics were high. If he made a promise you could bank on it. I have lost a friend and neighbor.

R. C. Daniels, Mississippi.

## WANTED—DARK HONEY

to fill government contract. Write, wire or phone immediately.

ILLINOIS HONEY PRODUCERS ASS'N, Inc. : Mt. Sterling, Ill.

### Plant's 3-Banded Italians

Shipped on time, in new, light weight cages. State health certificate with each shipment. Live full weight arrival.

	1-24	25-99	100-up
2-lb. package with queen	\$4.50	\$4.25	\$4.00
3-lb. package with queen	5.75	5.50	5.25
4-lb. package with queen	7.00	6.75	6.50

Queens \$1.25 each, any quantity.

20% holds shipping date. Balance two weeks before shipping.  
Packages are F. O. B. Queens postpaid.

W. E. PLANT, Rt. 2, Hattiesburg, Mississippi

### EPHARDT HONEY FARMS

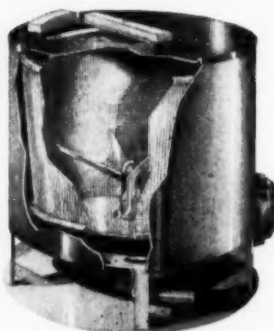
RT. 2, BATCHELOR, LOUISIANA

#### Package Bees with Carniolan Queens

MAY DELIVERY BY EXPRESS

2-lbs. bees, young laying CARNIOLAN QUEEN	\$4.50
3-lbs. bees, young laying CARNIOLAN QUEEN	5.50
Extra CARNIOLAN QUEENS	1.35

### The Diamond Line Spinner



Pat. Applied For.

A Honey of a moneymaker

WE THANK YOU!!—for your interest, inquiries and orders. We hope to keep production abreast of the demand. BUT to avoid possible later disappointment, ORDER NOW. IT DOES THE WORK!

This Stainless Steel Cappings drier is compact, 30 in. x 30 in. Shipping weight 200 lbs. Priced complete with motor, ready for work, at \$225.00 F. O. B.

### THE DIAMOND MATCH COMPANY

APIARY DIVISION

1300 PRODUCE STREET  
LOS ANGELES 21, CALIFORNIA

Or

CHICO,  
CALIFORNIA

Write for complete catalogue of Diamond Quality Bee Supplies.

### Queens PACKAGE BEES Queens

Italian strain line bred for honey production. Queens shipped daily prepaid by air mail. Contact us for reduced prices on large orders of queens and package bees.

	1 to 9	10 to 49	50 to 99	100 up
2-lb. pkgs. with young queen	\$4.50	\$4.25	\$4.15	\$4.00
3-lb. pkg. with young queen	5.05	5.40	5.30	5.15
Queens, daughters of tested breeders	1 to 24 \$1.35	25 to 49 \$1.30	50 to 99 \$1.25	100 up \$1.20

Live delivery guaranteed

SOUTHLAND APIARIES : Montgomery & Son : Ball, La.

### Queens-Italians-Queens Northern Raised —Northern Bred

These Hardy—Selected Queens are from heavy honey producing stock and no better Queens are produced. Booking orders now. June 1st. to November 1st, each \$1.50. Cash with order. Airmail service.

### BAKER'S APIARIES

GLENCOE, ILLINOIS

### ELK MOUNTAIN POLLEN SUPPLEMENT

is a scientifically Blended Bee Food compounded specifically to furnish the bees and brood with a vitamin enriched substitute for nature's own pollen. Send \$1.00 for a post-paid trial bag with feeding instructions. The bees love it.

### ELK MOUNTAIN PRODUCTS

### LEATHER ITALIAN

## QUEENS

Begin shipping April 1st

SEND

YOUR

ORDER

\$1.25

O. K. ANDERSON & SON  
COFFEE SPRINGS, ALA.

### BREAD AND BUTTER QUEENS

HOLLOPETER reared Northern Bred-for-business strain Italians. Young laying queens, May 20-June 20, \$1.25; June 20-November 20, \$1.00.

### WHITE PINE BEE FARMS

ROCKTON, PENNSYLVANIA  
Commercial Queen Breeders Since 1911

### Italian Queens and Package Bees

FULL WEIGHT PACKAGES OF  
YOUNG BEES AND QUEEN

	1 to 24	25-49	50 up
2-lbs. each	\$4.25	\$4.05	\$3.95
3-lbs. each	5.25	5.05	4.90
4-lbs. each	6.35	6.15	6.00
Queens, each	1.25	1.20	1.10

We guarantee Prompt Service, Live Delivery and a Health Certificate with each order.

### ALVIN J. DUCOTE

HAMBURG, LOUISIANA



## Package Bees For 1948

2-lb. with queen	\$4.50
3-lb. with queen	5.70
Queen	1.50

25% deposit to book order.  
Add 50c per package for less than 20 packages.

**EUGENE WALKER**  
GRIDLEY, CALIFORNIA

## Booked to Capacity on Packages

THANKS TO EVERY ONE

Can accept orders for a few hundred queens for May 15th to June 25th.

1 to 9	\$1.25 ea.
10 to 24	1.10 ea.
25 or more	1.00 ea.

## Crowville Apiaries

RT. 1 WINNSBORO, LA.

BLUE RIBBON

## Package Bees & Italian Queens

FOSTER APIARIES

COLUSA, CALIFORNIA

Successor to Thos. C. Burleson

## CAUCASIANS

2-lb. pkg. \$5.00.	3-lb. pkg. \$6.00
--------------------	-------------------

No extra queens until May.

D. T. WINSLETT

1015 Senoma Ave.  
NO. SACRAMENTO 15, CALIFORNIA

## WANTED

Thousands of Rabbits and other Small Stock, Poultry and Birds, Let

## "STANDARD RABBIT & PET JOURNAL"

Bring you the Monthly News of Rabbit, Cavy, Small Stock, Poultry, Birds and other Pets.

STANDARD RABBIT AND PET JOURNAL  
Box 251 MILTON, PA.

## McCord FRAME - GRIP



Patent Pending  
A light weight, handy instrument used for loosening and removing frames from the hive with one hand.  
Price \$2.50, plus 15c postage fee. Shipping weight 12 oz. Satisfaction discounts for dealers.

McCord MFG. CO.

RT. 2, BOX 866, SAN JOSE, CALIFORNIA

Brazos Valley Apiaries  
Cameron, Texas

## Bees and Queens

Brazos Valley Apiaries  
Cameron, Texas

ITALIAN OR CAUCASIAN

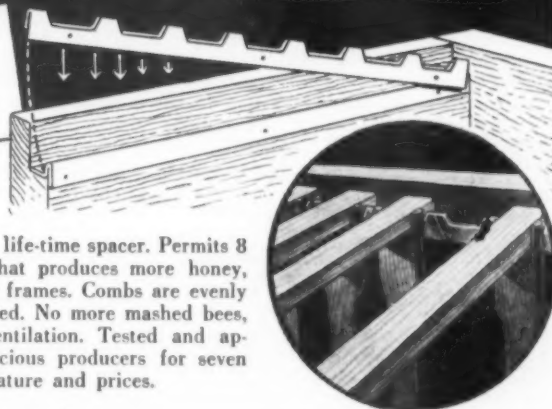
	1 to 5	6 or more
2-Lb. bees with young queen	\$4.25 each	\$4.00 each
3-lb. bees with young queen	5.25 each	5.00 each

Over a quarter of a century in the same place, in the same business is my record.  
My motto: I will expect to do business with you again.

**H. E. GRAHAM : Cameron, Texas**

## You save ALL WAYS with the STOLLER *Slip-on* FRAMESPACER

Stoller Spacers fit over, or replace, any standard frame rest or tin rabbet. 16 styles and sizes.



At last! An all-metal, life-time spacer. Permits 8 or 9 comb spacing that produces more honey, more wax with fewer frames. Combs are evenly capped. Easily installed. No more mashed bees, poor spacing and ventilation. Tested and approved by profit-conscious producers for seven years. Write for literature and prices.

## STOLLER *Honey Farms*

LATTY,  
OHIO

## 3-Banded Italian Queens and Package Bees

Full weight, highest quality, prompt delivery

2-lb. with queen	\$4.50	Each additional
3-lb. with queen	5.50	pound \$1.00

### UNTESTED QUEENS

1 to 25	\$1.25 each
25 to 50	1.20 each
50 up	1.15 each

Bessemer Apiaries : Rt. 6, Box 518, Greensboro, N.C.  
J. L. O'FERRELL, Manager

## DOVETAILING MACHINE

Now a size for every beekeeper's shop. A valuable machine for making your own hive bodies and supers and for repairing your old ones. No reason to ever be short of hives and supers with one of these machines in your own shop. Does a perfect job of dovetailing.

Requires only a small motor to operate. Make those slack winter months pay dividends by making your own equipment. Easy to operate and priced within reach of all beekeepers. Write for details.

**CARL E. JOHNSON CO.**

1557 Gregory Ave., Lincoln Park 25, Michigan

**Renew Your Subscription NOW**

## ITALIAN BEES AND QUEENS

	Queens	2-lb.	3-lb.	4-lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20
25-99	1.30	4.25	5.55	6.85
100-up	1.20	4.00	5.25	6.50

SHIPPING POINT EPES, ALABAMA

**LITTLE BROS. : Sumterville, Ala.**



## NEW DESIGN ELECTRIC UNCAPPING KNIFE—

# \$12

AC ONLY  
110-130V

6 ft. rubber covered asbestos cord,  
\$1.00 extra.

- THERMOSTAT CONTROL
- FASTER OPERATING
- EVEN TEMPERATURE
- LIGHT WEIGHT

**MACY ELECTRIC KNIFE COMPANY, Inc.**  
1239 S. LORENA ST. LOS ANGELES 23, CALIFORNIA

## GASPARD'S Quality Italian Queens and Package Bees

We are now booking orders for spring 1948 delivery. Only 20% with order, balance 10 days before shipping time. We guarantee live arrival and health certificate accompanies each shipment. Our shipping date starts April 1st. Prices as follows:

2-lb. package with queen	1-49	50 Up
3-lb. package with queen	\$4.25	\$4.00
4-lb. package with queen	5.25	5.00
5-lb. package with queen	6.25	6.00
	7.25	7.00
Queens \$1.35		

**GASPARD BEE CO. : HESSMER, LA.**

## HONEY EXTRACTORS



WE MANUFACTURE

**Extractors,  
Continuous Clarifiers,  
Filters, Etc.**

Let us help you equip your honey  
house for efficient operation.

Write us for information  
today.

**THE NEISES CO.**

P. O. Box 249

MARSHFIELD, WIS.

## BRIGHT ITALIAN QUEENS

Queens from our apiaries will give you beautiful gentle bees and service unexcelled. Many class them as Goldens. Many years experience has taught us the how in rearing the best. Untested queens: 1 to 24, \$1.25 each; 25 to 99, \$1.15 each; 100 up, \$1.10 each; Queens clipped and air mailed upon request.

**COTTON BELT APIARIES : Box 163, Klondike, Texas**

## THRIFTY QUEENS

Combless packages and queens.  
THREE-BANDED ITALIANS ONLY

**W. J. Forehand & Sons**  
FORT DEPOSIT, ALABAMA  
Breeders Since 1892

STATEMENT OF THE OWNERSHIP  
MANAGEMENT, CIRCULATION, ETC., RE-  
QUIRED BY THE ACTS OF CONGRESS  
OF AUGUST 24, 1912 AND MARCH 3,  
1933.

Of American Bee Journal, published monthly  
at Hamilton, Illinois, April 1, 1948.

STATE OF ILLINOIS, } ss.  
County of Hancock, }

Before me, a notary public in and for the  
state and county aforesaid, personally ap-  
peared M. G. Dadant, who, having been duly  
sworn according to law, deposes and says  
that he is the business manager of the  
American Bee Journal and that the follow-  
ing is, to the best of his knowledge and  
belief, a true statement of the ownership,  
management, etc., of the aforesaid pub-  
lication for the date shown in the above  
caption, required by the Act of August 24,  
1912, as amended by the Act of March 3,  
1933, embodied in section 537, Postal Laws  
and Regulations, printed on the reverse of  
this form, to wit:

1. That the name and addresses of the  
publishers, editors, and business managers  
are:

Publishers: American Bee Journal, Ham-  
ilton, Ill.

Editors: G. H. Cale, Hamilton, Ill., F. C.  
Pellett, Hamilton, Ill., M. G. Dadant, Ham-  
ilton, Ill., J. C. Dadant, Hamilton, Ill., R. A.  
Grout, Hamilton, Ill.

Business Managers: M. G. Dadant, Ham-  
ilton, Ill., J. C. Dadant, Hamilton, Ill.

2. That the owners are:  
H. C. Dadant, Hamilton, Ill.  
J. C. Dadant, Hamilton, Ill.  
V. M. Dadant, Hamilton, Ill.  
M. G. Dadant, Hamilton, Ill.  
C. S. Dadant, Hamilton, Ill.  
R. A. Grout, Hamilton, Ill.  
L. C. Dadant, Hamilton, Ill.  
R. H. Dadant, Hamilton, Ill.  
Louisa G. Saugier, Hamilton, Ill.

3. That the known bondholders, mortga-  
gees and other security holders owning or  
holding one per cent or more of the total  
amount of bonds, mortgages, or other se-  
curities are: None.

4. That the two paragraphs next above,  
giving the names of the owners, stockholders,  
and security holders, if any, contain not only  
the list of stockholders and security holders  
as they appear upon the books of the  
company but also, in cases where the stock-  
holder or security holder appears upon the  
books of the company as trustees or in any  
other fiduciary relation for whom such trustee  
is acting, is given; also that the said two  
paragraphs contain statements embracing  
affiant's full knowledge and belief as to the  
circumstances and conditions under which  
stockholders and security holders who do  
not appear upon the books and securities in a  
capacity other than that of a bona fide  
owner; and this affiant has no reason to be-  
lieve that any other person, association, or  
corporation has any interest direct or in-  
direct in the said stock, bonds or other  
securities than as so stated by him.

(Signed) M. G. DADANT,

Business Manager American Bee Journal.  
Sworn to and subscribed before me this  
20th day of March 1948.

MINNIE S. KING, Notary Public  
My commission expires Nov. 17, 1949.

## FOR SALE

BRIGHT YELLOW AND THREE  
BAND QUEENS

**GRAYDON BROS.**

RT. 2 GREENVILLE, ALA.

Renew your subscription

AMERICAN BEE JOURNAL

# ... Crop and Market

By M. G. Dadant

## How Is Honey Moving?

Without exception there is no strong movement of honey throughout the United States or even in Canada. Most of the reporters state that honey is moving quite slowly, with a few reporting a fair movement and evident pickup during March. However, it cannot be said that the movement is anywhere near accelerating to the point where a fair proportion of the crop left on hand will move.

## Percentage On Hand

In the New England States, as previously reported, as well as along the Atlantic seaboard and throughout the South extending to Texas, the amount of honey left on hand is not out of proportion to the average in years past, except for a few larger beekeepers who have a considerable proportion of their crop on hand. Otherwise, the amount left probably ranges from 5% to 25% which is not excessive.

However, beginning in Indiana and extending through the Central West and into the intermountain territory you find the heaviest amount on hand, ranging from 30% even to as high as 90% of the honey still held. It is hoped that much of this is amber honey and that the "government proposed purchase of 12 million pounds" may clear the situation somewhat. However, there is no doubt but that there even are large quantities of the light amber and white honey still in the hands of beekeepers as well as in the hands of the packers and cooperatives.

## Honey Prices

Here we find a great range in prices, with a tendency toward a return to the prices which prevailed previous to the war when the small beekeeper maintained a fairly level price, excepting for keen competition cutting in many places.

Again where the honey has moved satisfactorily: namely, the New England States and throughout the South, we do not find the tendency for cutting prices. In fact, the writers were surprised at the prices which have been maintained, ranging from 30c

to 45c for 1-pound pails retail, and from \$1.25 to \$2.00 for the 5-pound.

When we reach the Central States, however, and particularly in the intermountain territory, we find a greater range of the 1-pound jars retailing as low as 23c and as high as 40c with the bulk of the quotations around 32c to 35c. The 5-pound pail quotations run from \$1.20 to \$1.75 retail. However, there are several reports of 5-pound pails moving as low as 89c to \$1.05 and we have knowledge personally of one instance where the chain store is selling amber honey at \$1.05 for a 5-pound pail.

To aggravate the situation also, many grocers are selling no honey and holding what they have on hand, either in liquid or granulated form, attempting to get the old high prices of \$1.80 to \$2.00 for a 5-pound pail. Naturally little is moving at these figures. It is questionable how much would move were the prices reduced, but undoubtedly there would be more incentive to buy were the prices in line.

## Winter Losses

Winter losses in the Southern States have not been excessive, in fact, conditions we believe have been as good as they have been in many years, and this extends through Texas, New Mexico, and Arizona.

As we go farther north, however, we find the question of losses a very grave one. The provinces of Canada and the northern tier of states in the United States, of course, were not yet out of winter when reports were sent in about March 10. No idea can be gained of the losses there. In the central northern belt, however, extending clear across, we get reports of extremely high losses, some as high as 70% of the bees. This is caused by two things: First, amber honey left as stores in many cases did not ripen sufficiently; and secondly, a very prolonged winter when the bees had no opportunity of flight and no opportunity of moving from one part of

the hive to the other to replenish their stores.

As a general rule we may look for a much higher loss of bees than usual with a tendency, at least on the part of the larger producers, not to recoup their losses on account of the state of the honey market.

Similar losses have been reported in the intermountain territory except that Montana reports conditions normal or above, as also does Idaho.

In California there has been a prolonged drought which had scarcely been broken by March 10, and subsequently many bees have succumbed. It is doubtful whether at the date this is written (March 19), sufficient moisture has fallen in California to alleviate the situation.

It is our estimate that throughout the North Central area the losses will run from 10% to 20%, although with our own bees in Hamilton we have less than 5% loss and bees are in good condition.

## Condition of Bees

The New England coast and the South report bees in good condition, although some parts of the South were affected by the late sleet and snow. This applies particularly to Arkansas, Tennessee, Kentucky, and states in the same latitude. There the bees are behind time. Some parts of the South are equal to normal and some queens have already been mated in the queen rearing areas with all preparations ready for shipment of the bees.

Farther north the condition of bees is not as satisfactory as might be desired. This is due partly to the prolonged winter and partly to the moisture conditions which undoubtedly will make for a recurrence of Nosema such as we had last year, unless we get a dryer, warmer spring.

All in all it is probable that bees are not quite in as good condition as a year ago at the same time. Naturally farther north no estimate is possible.

## Beekeeping In Washington

A new bulletin recently issued by the State College of Washington at Pullman is, "Beekeeping in Washington" by R. L. Webster, State Entomologist. It is Extension Bulletin 289 dated November 1947.

The bulletin contains 44 pages of elementary information for beginners with bees and is well illustrated. Copies can be obtained by addressing the State College.

**HONEY WANTED** Cars and less than cars  
Top Prices  
C. W. AEPPLER CO., Oconomowoc, Wisconsin



# RED STICK APIARIES & CO.

MEMBER LOUISIANA RETAILERS ASSOCIATION

## Package Bees and Queens

28 Years as Commercial Queen Breeders.

Oldest Comless Package Bee Shippers in Louisiana.

## Disease Resistant Stock-Italian Bees & Queens

2-lbs. with spring bred laying queens	\$4.25
3-lbs. with spring bred laying queens	5.25
Extra queens—any number	1.25

Red Stick package bee cages are light in weight, made from cleaned, resawed lumber never thicker than 3/15 inches, saving express weight. Watch the sturdy, well built, cheerful 1948 Red Stick Package Bees go by on your railroads. Packages well prepared, drone free; a bee swarm so easy to handle, so easy to hive.

WHY PAY MORE FOR THE BEST  
BOOK EARLY—PLANNING WITH ENTHUSIASM IS THE  
ESSENTIAL OF SUCCESSFUL BEEKEEPING

## RED STICK APIARIES & CO.

MAIN OFFICE, 113 LEE AVENUE

DONALDSONVILLE, LOUISIANA

Telegraph Western Union

## Leather Colored Italian Queens and Package Bees

Two pound package with queen	\$4.50 each
Three pound package with queen	5.60 each
Queens	1.50 each

Postage paid on queens. Express charges collect on package bees. 20% deposit with order and balance before shipment.

C. G. WENNER : Glenn, California

## Package Bees With Young Queens 1948 ITALIANS 1948

PRICES:		
2-lb. package with queen	\$4.25	
3-lb. package with queen	5.50	
Extra Queens	1.35	

Write for quantity discount.

\$1.00 per package books your order, balance 10 days before shipping, health certificate, live delivery. SATISFACTION.

BOZONE APIARIES : Waynesboro, Miss.

## PACKAGE BEES : QUEENS : 1948

Now booking orders for this high producing strain of LEATHER COLORED ITALIANS. Queens are reared direct from the egg (not grafted or disturbed), produces more vigorous queens, less supersedure. Still have some choice shipping dates open during April. We start shipping March 15th. 20% books you.

	1-9	10-49	50 Up
Queens	\$1.40	\$1.35	\$1.30
2-lb. Bees	4.50	4.35	For queenless package
3-lb. Bees	5.75	5.60	deduct price of queen.

NOVINGER APIARIES, Oxford, Florida

## FOR SALE—QUEENS

My queens have the qualifications to make you a successful beekeeper. Three Band Italians only. Pure mating and satisfaction guaranteed. Write for my attractive prices and open dates.

S. C. ZEIGLER

Ft. Deposit, Alabama

## Modern Beekeeping

The picture magazine of beekeeping. We show you with pictures how to do the job easier, quicker, and better. Special Inventor's page.  
1 yr. \$1.50; 2 yrs. \$2.50; 3 yrs. \$3.25

MODERN BEEKEEPING  
PADUCAH, KENTUCKY

## PACKAGE BEES

### Three-Banded Italian With Queen

2-lb. pkg.	1-49 \$4.20	50-100 \$4.00	Express
3-lb. pkg.	5.10	5.00	Collect

Live delivery guaranteed.  
Shipping Starts April 10th.

## BOND & SON APIARIES

Route 2, Box 100-C, Vicksburg, Mississippi

## The Newton Bee Co.

ROUTE NO. 2, BATON ROUGE, LA.

## Package Bees Queens

## Comb Honey

## Queens!

We are not in the queen rearing business and not in competition with our friends the queen breeders. Due to the many requests for comb honey stock, we now offer a few extra queens for sale. Please write for prices.



Pollen Traps—Soy Flour—Brewer's Yeast—Pollen Supplement—and Special Comb Honey Equipment.

Killion & Sons Apiaries  
PARIS, ILLINOIS

## Italian Queens and Package Bees

We are now booking orders for 1948 delivery, only 20% with order, balance 10 days before shipping date. We guarantee live delivery and health certificate with each shipment. Prices as follows:

2-lb. package with queen	\$4.00
3-lb. package with queen	5.00
4-lb. package with queen	6.00

Clover Bee Farms  
HESSMER, LOUISIANA

## PACKAGE BEES ITALIAN QUEENS

J. F. McVAY

JACKSON,  
ALABAMA

For the best in bees—read the A-B-J ads

# ..... Postscript

Frank C. Pellett

Seed of a new *crotalaria* came to me from Wm. Kyburz, in Columbia, South America, last March. It is a perennial which does well on poor soil and is much loved by horses and rabbits. Since the *crotalias* commonly used in Florida are not palatable to animals it was hoped that this might prove of use in that state. The seed was sent to J. H. Kauffman, of Eustis, Florida, for trial.

The plants grew to a height of five to six feet and began blooming in October. As the seed pods began to mature in December the seeds were destroyed by weevils and the plants all killed by the January freeze. Thus we have another disappointment. Had the trial been made further south below the frost line perhaps the outcome might have been different.

N. E. Hansen, the first plant explorer for the U. S. D. A. and long head of the Department of Horticulture of South Dakota College of Agriculture once said to me, "In your work remember that experts are usually opposed to a new idea." Hansen who is one of the greatest of modern plant breeders has made much plant history in the midwest and was consulted by the present government when setting up the five-year plan in Russia. It is very easy to verify his statement by noting the common reaction to every important new idea that is proposed.

C. H. Pirkey, of Charlottesville, Virginia, reports that his bees were busy on the small blue flowers of the creeping vine, Gill or Ground Ivy (*Nepeta hederacea*), from April until June. The plant is common around old homesites where it spreads its dense mats among the weeds and grasses. Rarely is there enough of it to make much difference for the bees but if it could be found by the acre substantial increase in the honey crop is a likely result. Beekeepers would do well to scatter seeds in waste places. The long blooming period and its great attraction for the bees are very desirable.

Lemon mint (*Monarda citriodora*) is the source of an average as high as 100 pounds per colony for H. A. Schaefer, of Osseo, Wisconsin. It grows on the light soil of abandoned farms in the jack pine country and on gravel soils where few other plants are found. It begins to bloom after white clover and lasts till frost. Lemon mint resembles the horsemint and like that plant can be easily naturalized on sandy waste lands.

A young German beekeeper of 24 wishes to correspond with someone in America. He lives in a small village and wishes to learn more about American methods of beekeeping and to improve his English through letter writing. His address is Hans Geng, (13a) Engelthal 5f, Kreis, Hersbruck, Bayern, U. S. Zone, Germany. He writes very good English and should provide an interesting contact overseas.

Mrs. Frances R. Williams, of Winchester, Massachusetts, calls attention to the value of narrow leaf mountain mint for decoration. This mint, (*Pycnanthemum flexuosum*), offers masses of white flowers which serve very well when large quantities are needed. Mrs. Williams used it at her daughter's wedding. She recommends it as a florists' item in late July when white flowers are scarce. The beekeeper is interested in any purpose which will encourage its cultivation since it is a very good honey plant.

The severe weather of the past winter spread a thick coat of ice over the Mississippi River and compelled the eagles which live by fishing to move southward. At Hamilton we are told that ice was 20 inches thick above the dam while there was open water below. On the morning of the 1st day of February there was a concentration of eagles in this area such as I never saw before. In company with Bob Dadant I counted 34 in the trees along the river at one time and all within a range of about a quarter of a mile. Eagles are common here in winter but in smaller numbers.

Wm. Wyatt, of Estacado, Oregon, says that dry stems of anise-hyssop make the best smoker fuel that he has ever tried. He packs the dry material in the smoker and lights it from the top. He reports that it burns for two or three hours. It should make a fragrant smoke without the disagreeable odors of some materials.

Mr. Wyatt is planting for bee pasture on a large scale, not overlooking the cash return for grain or forage as well. He is sowing 12 acres of buckwheat, 15 acres crimson clover, 200 acres of hairy vetch on logged off land as well as smaller amounts of other plants. He reports that subterranean clover is extensively grown in his neighborhood but that he has never found the bees working it.

A. H. Sterz of Morrisville, Pennsylvania, regards privet as a dependable source of nectar giving a fair summer crop in good years and bad. The honey has the flavor of molasses and he has been accused by customers of blending molasses with his honey and they were not too enthusiastic about its quality. He says if you put it in the icebox it will remind you of ripe strawberries.

In his book "Stingless Bees," Herbert Schwarz mentions the fact that honey stored by stingless bees does not usually granulate but remains liquid indefinitely. He mentions a case of honey kept in jars for thirty years without showing any crystallized sediment. The question arises as to whether it may not be due to the source rather than the kind of bees which store it. Perhaps if they worked on different kind of flowers their honey might granulate as readily as the product of the hive bee.

Robert Hardin sends an interesting publication about the Mungbeans at the Oklahoma Experiment Station and inquires whether we have had them in the test garden. Mungbean is a forage crop that comes from China and is attracting some attention in the experiment stations. It did very well for us and yielded a good crop of beans but the bees refused to work the flowers. In Georgia the bees are said to get honey from it as they do in other southern states. Perhaps if we had continued to grow it the bees might have done better in other years but I failed to find a single bee on it and discarded it at the end of the first season.

# Classified Advertisements

## BEES AND QUEENS

**NUCLEI FOR SALE**—Either shipped from here or delivered Groton, N. Y. Write for reasonable prices. Millard Coggsall, Minneola, Florida.

**150 NUCLEI** for May delivery. Buyer to furnish hives. No disease. Andrew McBride, Hawarden, Iowa.

**BOOKING LIMITED NUMBER** of package bees and queens for shipment April 15th to May 30th. 2-lb. package with queen, one to nine, \$4.50; one hundred, \$4.00. 3-lb. package, one to nine, \$5.65; one hundred, \$5.15. Queens \$1.30 each. Russell-Barnes Apiaries, Box 252, Channelview, Texas.

**QUEENS**—Young leather colored Italian queens. Live delivery and fertility guaranteed. 1-25, \$1.10; 26-99, \$1.05; 100 or more, \$1.00. Terah Woodcock, 520 W. Orange St., Jesup, Georgia.

**CAUCASIAN Queens and Package Bees.** Booking orders for 1948. 2 pound package, \$5.00; 3 pound package, \$6.00. Queens, untested, \$1.50. Lewis & Tillery Bee Co., Rt. 1, Box 280, Greenville, Alabama.

**ITALIAN BEES**—3 pound package with young queen \$5.00 at Medford, Oregon. Satisfaction guaranteed. Lakeview Apiaries, Lakeview, Oregon.

**CAUCASIAN QUEENS** to fill your hives with gentle, high-producing bees. Howard E. Crom, Rt. 1, Box 75, Ripon, Calif.

**JOE'S ITALIAN BEES AND QUEENS** for May and June delivery. 2-lbs. with queen \$4.00; 3-lbs. with queen \$4.90; 4-lbs. with queen \$5.75. Live delivery and health certificate guaranteed. Joe Roy Apiaries, Hessmer, Louisiana.

**ITALIAN PACKAGE BEES AND QUEENS** for April delivery. Three-pound package of bees with queen, \$5.75. Queens \$1.40 each. Four and five-frame nuclei available in April and May. Write for particulars, Brose and Stevens Apiaries, P. O. Box 36, Felton, Calif., Phone Santa Cruz 32-W-2.

**PACKAGE BEES, NUCLEI, QUEENS.** Two pounds 8 ounces of bees with young Italian queen, \$4.25 each any quantity. We add 10% for shrinkage. Experienced shippers. No disease. Apiaries officially inspected. Light cages. We are offering a good package priced in line with present honey prices. Why pay more and get less than we are offering you! Other prices on request. Elevation Apiaries, Milano, Texas.

**THREE POUND PACKAGE** certified Italian bees with queens, \$5.00 each. Todd Apiaries, Colquitt, Georgia.

**FOR SALE**—Three pound packages certified Italians with queen, \$4.50, shipped after May fifteenth. A. V. Dowling, Valdosta, Georgia.

**THREE BANDED ITALIAN** bees and queens. Best of quality. 2-lb. with queen, \$4.50; 3-lb. with queen, \$5.50. Select untested queens, 1 to 25, \$1.25 each; 25 to 50, \$1.20. 50 up, \$1.15; for tested, double the price. Health certificate with every order. Black River Apiaries, Currie, North Carolina.

**ITALIAN BEES AND QUEENS.** Packages with queens—2-lb., 1-25, \$4.50; 25-99, \$4.25; 100 up, \$4.00. 3-lb. \$5.85, \$5.55, \$5.25 respectively. Extra queens, \$1.40, \$1.30 and \$1.20 respectively. Health certificate, live delivery guaranteed. J. Otto Hall, Box 415, Prichard, Alabama.

**LANGE'S FINE ITALIAN** queens give the best in satisfaction. Write for prices and open dates. Lange Apiaries, Rt. 2, Box 23W, Mission, Texas.

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department it should be so stated when advertisement is sent.

Rates of advertising in this classified department are thirteen cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers we require reference of all new advertisers. To save time, please send the name of your bank and other reference with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease or state exact condition, or furnish certificate of inspection from authorized inspectors. Conditions should be stated to insure that buyer is fully informed.

**CAUCASIAN AND CARNIOLAN BEES.** 2-lb. pkg. \$5.00; 3-lb. pkg. \$6.00. Untested queens, one, \$1.35; fifty, \$62.50; one hundred, \$120.00. Book your order early. Tillery Brothers, Greenville, Alabama.

**ITALIAN BEES AND QUEENS**—2 pound packages \$4.25; 3 pound packages \$5.50. Also queenless packages and nuclei. Discounts on large orders. Walker Apiaries, Pharr, Texas.

**ITALIAN QUEENS.** Booking orders now. Raised for honey production. \$1.00 each. Kirkwood Apiaries, Bristow, Oklahoma.

**ITALIAN QUEENS** \$1.05 each. Air Mail; after June 1st 90c each. Every queen guaranteed. Walter D. Leverette, P. O. Box 364, Fort Pierce, Florida.

**GOLDEN ITALIAN Package Bees and Queens**—2-lb. and queen, \$4.50; 3-lb. and queen, \$5.50; untested queens \$1.25 each. All bees shipped in new cages and a health certificate with every order. Carolina Bee Farm, Graham, N. C.

**PACKAGE BEES AND QUEENS**—2 pounds with queen \$4.50; 3 pounds with queen \$5.85. Queens are all 3-banded Italian and highest quality. Extra queens \$1.40 each. Wm. F. Daughtry, Hartford, Alabama.

**CAUCASIAN QUEENS.** Are you looking for good queens? Try our Caucasian. They have proved good since 1932. Twenty-two years' experience rearing queens. Write for information. Mark L. St. John, Ripon, Calif.

**A GOOD RULE** to go by—Buy your Italian bees and queens from ALABAMA APIARIES, Uriah, Alabama.

**THREE BANDED ITALIAN** bees and queens for April and May. All packages with queens—2-lb., 1-25, \$4.50; 25-99, \$4.25; 100 up, \$4.00. 3-lb. \$5.85, \$5.55, \$5.25 respectively. Extra queens, \$1.50, \$1.30 and \$1.20 respectively. Inspection certificate furnished. Write for further information. Cottage Hill Apiaries, Rt. 2, Mobile, Alabama.

**1500 PACKAGES FOR APRIL ONLY** with Italian queens at prevailing California prices. Cash for order 10 days before shipping. D. N. Brown, 1661 Orchard Ave., Pomona, California.

**THREE BANDED ITALIAN** bees and queens for 1948. Queens \$1.00 each. 2-lb. pkgs. with queen \$3.50 and 3-lb. pkgs. with queen \$4.50. George O'Neill and Sons, Haines City, Florida.

**BREWER'S LINE-BRED CAUCASIAN QUEENS**—Now booking orders for April delivery. 30c deposit on each queen at time of booking. No package bees. Brewer Brothers Apiaries, 3616 Caucasian Circle, Tampa 6, Florida.

**PACKAGE BEES, QUEENS, Italians.** Circular free. Crenshaw County Apiaries, Rutledge, Alabama.

Bill Atchley's famous queens and nuclei, they really make you money. Untested February, March, and April, \$1.50 each; May, June, July, \$1.25 each. Nuclei all sizes, April, May, and June delivery, at special low prices quoted upon request. A real bargain in single story colonies for May and June delivery. Wm. Atchley, 500 E. Ninth St., Upland, California.

## HONEY AND BEESWAX WANTED

**EXTRACTED** and comb honey. Package bees. Konce, North Abington, Mass.

**WANTED**—Extracted honey. Will pay top cash prices. Also beeswax. Guy Polley, Nevada, Iowa.

**BEESWAX AND HONEY — WE PAY** top prices for beeswax. Send for shipping tags. Also send us sample of honey and your price. Want carloads or less. **GLASSWARE**—We carry carloads of all sizes in stock at wholesale prices. Let us quote on your needs. **SUPPLIES**—Wooden shipping cases for two 60's with strap iron. New and used. Assembled or knockdown. Root's three ply and Dadant's Crimp-wired foundation, corrugated cartons for 60's, sulfathiazole. **NOTICE**—We are equipped to liquefy, process, and pack your honey for foreign shipment. Alexander Company, 819 Reynolds Road, Toledo, Ohio.

**WANTED**—Extracted honey, white or light amber, in 60's. State price in first letter. Ed. Heldt, 1004 W. Washington St., Bloomington, Illinois.

**HONEY WANTED**—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. **HAMILTON & COMPANY**, 1360 Produce Street, Los Angeles, California.

## HONEY FOR SALE

**HONEY**, fancy extracted clover, white to water white, 18c per lb. in 60's. Amber honey 12c lb. Lose Brothers, 206 E. Jefferson St., Louisville, Ky.

**1000—60's** fancy white, not cased. Selmer Markestad, Canton, Minn.

**FALL HONEY** in new 60 lb. cans, 17c per lb. 5 lb. postpaid 3rd zone, \$1.25. Edw. Hogan, 210 Gibson St., Canandaigua, N. Y.

**HONEY**—Can or carloads. Good quality. Russell D. Smalley, Beaver, Iowa.

**100,000 lbs.** alfalfa sweet clover in new 60's. C. M. Kell, 1027 Choctaw Ave., Chickasha, Okla.

**FOR SALE**—12,000 lbs. of fancy basswood honey at 17c per lb. Sample on request. Hesselberg Honey Farm, Potosi, Wisconsin.

**FOR SALE**—724 cans of amber honey in new 60's at 15c f.o.b. honey house. Walter Rink, Port Hope, Mich.

**"MOUNTAIN STATE"** sourwood, 10-lb. \$4.00; Comb, \$5.00. Alvin Smith, Zenith, West Virginia.

**WHITE HONEY** in new sixties. Can or carload. Satisfaction guaranteed. Sample one time. Prices on request. Harry C. Kirk, Armstrong, Iowa.

**NEW CROP** of orange honey in large quantities. Write for price. E. R. Raley, Box 1610, Daytona Beach, Florida.

**100—60's** amber clover honey, 15c lb. 125—60's dark, 14c lb., F.O.B. Roy Baxley, Christopher, Illinois.

**EXCELLENT QUALITY** clover honey in new 60's, 10's or 5's, or car lot 60's. Write or buzz, Ohmert's Bee Farms, Dubuque, Iowa.

**SWEET CLOVER HONEY** in sixty pound cans, carload lots. Also few hundred cans of Buckwheat honey. Shipping point Bruce, South Dakota. Address J. D. Overbey, care Box 471, Woodville, Mississippi.



## FOR SALE

65 MODIFIED DADANT hives with combs, no bees. Located near Baudette, Minnesota. Box 40, Care American Bee Journal.

Extractor—Root AUTOMATIC REVERSIBLE FOUR FRAMES—Hand drive, Standard-Pockets, perfect shape. First \$60.00 gets it. Peter Tangen, Ossian, Iowa. We have honey also.

FOR SALE—700 three-story hives of bees ready for delivery the last of April or in May 1948. These are standard equipment mostly dovetailed, 9 combs to each 10 frame super, two pound package and queen installed, \$14.50 each. Equipment in excellent condition; certificate of inspection furnished. Will deliver loads of 70 three-story colonies within 600 miles of Roseau, Minnesota, for a reasonable delivery fee. This is part of the Wenner Brothers Apiaries, Roseau, Minnesota. If interested write to C. G. Wenner, Glenn, California.

FOR SALE OR LEASE—Complete 400 colony outfit, supers, extracting equipment, etc., with locations in Madison, Wisconsin, area. Write Box 35, Care American Bee Journal.

FOR SALE—Standard 8- and 10-frame bee hives. Number 1's, \$1.05 each. Hoffman frames \$8.00 per 100. Four cleat covers, 80c each. Bottom boards, 80c each. K. D. and F. O. B. factory. Write for catalog. Satisfaction guaranteed. Hagen-Lunceford Mfg. & Supply, 2500 North Fourth Street, Coeur d'Alene, Idaho.

BEE FARM 35 acres, 9 acres cultivated, balance in sugar maple for syrup. Also many other trees, basswood. Good springs for trout ponds. On state highway 64 and Wolf River on north line. 30 colonies bees. Poor house but a new 18x32 ft. stone cellar for new house. 24x24 ft. chicken coop and barn 2 story, concrete walls. Many fruit trees. Nice flower gardens. half mile west of Langlade, 2 miles from White Lake. Price \$3500.00. About 10,000 ginseng plants. Good clover growing locally. Good fishing, trout and bass, on Wolf River. Jerry Pavak, White Lake, Wisconsin.

350 COLONIES bees, strong two and three stories, cleated, new paint, no disease. All or part \$10.00 each. W. Hannon, Rt. No. 1, Box 217-F, Monterey, California. Phone 5001.

FIFTY HIVES OF BEES, single eight-frame hives, six dollars each. Roy Miselbrook, Kimmund, Illinois.

ROOT nickle-plated jar filler with hose \$10.00. Root power uncapping plane \$25.00. Root two-frame extractor No. 18, 12 inch pockets, \$30.00. Two frame extractor with cappings basket, power drive, \$25.00. 500 10-frame bodies with combs, \$2.50 each. 200 10-frame hives of bees, 4 stories, \$15.00 each. 100 10-frame bottom boards, 75c each. 55 10- and 8-frame hives, 1 1/2 and 2 story, with bees, \$8.00 each. 68 3-frame baby nuclei, size 10-8-5, like new, complete \$1.00 each. All equipment is free of disease, and bees to be inspected day of sale. Homer Godwin, Emison, Ind.

SURPLUS—400 colonies in Florida, full of bees and honey. All or part. Suitable for package bees or honey production. Information on request. Box 1610, care American Bee Journal.

EQUIPMENT for 300 colonies, standard 10-frame, wired foundation. Will let out on shares. Sell 100 or all. With good locations Red River Valley. State inspected. Two 2-fr. reversible Root Extractors, \$20.00 each. Leo Bear, 1204 Sixth Ave. North, Grand Forks, North Dakota.

FOR SALE—200 colonies of bees, 2-story ten-frame standard. State inspected, 400 extra supers. Also extra equipment and a very fine honey producing location. George T. Smith & Son, 8th & Highland, Clarkston, Washington.

500 eight-frame colonies Caucasian bees, with or without supers and locations. Disease free. Will sell in units of 100. H. D. Rauchfuss, Box 112, Worland, Wyoming.

SEVERAL HUNDRED COLONIES of bees for lease. W. D. Chiles, P. O. Box 911, Albuquerque, New Mexico.

FOR SALE—Superior lifetime extractor, 8-16 frames, 13 inch pockets, complete and in good condition, \$165.00. Myron Frisque, 526 S. Van Buren, Green Bay, Wis.

FOR SALE—Rumbaugh Chestnut Nursery and Farm. 750 blight resistant Chinese chestnut trees of bearing age. Grafted black walnuts, Hart nut, alberts, grafted persimmons, also fruit trees. 60 hives of bees with full line of equipment. Reason for selling, death of owner. Mrs. Verl H. Rumbaugh, Duncannon, Pennsylvania.

FOR SALE—Toledo over-under Gravitygram scale 30 pound capacity. Complete set of weights. Used very little. Duane C. Griggs, Washington, Iowa.

60 two-story colonies \$8 each. Ten-frame standard good equipment and combs, mostly cypress. Also surplus full depth supers with drawn combs, reasonable price. No disease. James J. Smith, Box 557, Auburn-dale, Florida.

800 TEN-FRAME colonies with locations. Four supers each. Twelve dollars each. Also complete extracting equipment. This is a first-class outfit. Absolutely no disease. J. F. Shipton, Lander, Wyoming.

SURPLUS 400 colonies bees in new standard hives. Priced right. State inspected. Box 383, Berryville, Virginia.

BEES located in northwestern Minnesota to sell or lease on share basis. Need help March first. State wages expected first letter. Hopkins Honey Farms, Maringouin, La.

FOR SALE—100 colonies bees in 10-frame double hives, wired combs. Inspection at time of sale. P. Goettsch, Goose Lake, Iowa.

PACKAGE BEES. Honey. Used 60's. Lewis-Dadant beeware. Harris Bee Supply, Jackson, Tennessee.

FOR SALE—Complete equipment to run 700 hives, all ten-frame. Will consider best offer on 100 hives or more. Located at Roseau, Minnesota. Package bees available. Other interests. Write to C. D. Hollister, Waseca, Minnesota.

FOR SALE—200 clean shallow extracting supers \$1.10 each. Price includes 5% frames, also thin super foundation. Fred Peterson, Alden, Iowa.

700 colony outfit, plenty supers, 10-frame, wired combs. Inspected. 11 yards in good producing area. Brick and tile extracting and packing plant. Automatic steam heat, processing, labeling and filling machinery. 1947 truck. An ideal outfit. Sell complete or colonies with or without supers. Also new deep and shallow supers with frames and foundation, at discount. Robinson Apiaries, Oelwein, Iowa.

600 colonies bees, requeened 1947, in lots of 100 or more. 10-frame honey supers with bees if desired. Inspection certificate furnished. Complete list of equipment on request. NORTHERN MICHIGAN APIARIES, Petoskey, Michigan.

FOR SALE—Used Modified Dadant equipment. Good condition, all factory made, crimp-wired foundation in combs, no AFB. 100% clean last inspection; combs in excellent condition. Hive bodies with 11 combs \$3.30; hive bodies with 11 frames \$1.10; hive bodies empty 65c. Super with

10 combs \$2.00; super with 10 frames 75c, super empty 45c. Metal telescope cover 75c; inner cover 20c. Discounts 5% over \$100.00—10% over \$200.00. Melford Olson, Red Lake Falls, Minnesota.

232 colonies bees in Grant County with five good locations. Lots equipment and supplies. No disease. Clyde Cobb, Belleville, Arkansas.

FOR SALE—1,000 colonies of bees on good location. Extracting equipment and everything needed to produce a honey crop. No disease. Write Box 27, care A. B. J.

## WANTED

WANTED—A good hand or motor driven reversible extractor. State price and condition. F. M. Dick, Brookneal, Va.

## POSITIONS AND HELP WANTED

WANTED—Capable experienced beeman. Salary or share crop. Also wanted—unexperienced helper. Box 783, Dillon, Mont.

WANTED—Reliable young man, single or married, experienced in producing honey. State wages. Rex Schlemmer, Edgar, Mont.

EXPERIENCED and INEXPERIENCED help in honey production. Seasonal or year around. State age, bee and truck experience. Stewart Apiaries, Fairfax, Missouri.

AGRICULTURE STUDENT. Apiary helper. May to September 15. 6 ft., 160 lbs. Good health and references. Sidney Nyholm, 69 South Fifth Avenue, Clarion, Pa.

EXPERIENCED and INEXPERIENCED help needed in package bee production for 1948 season. Also queen breeder. Year around job right parties. F. E. Morrison, Rt. 2, Box 103, Auburn, California.

## SUPPLIES

PICK UP WHEELBARROWS, paste applicators, smoker canes. Free circular. Paul Johnson, Rt. 2, Peru, Indiana.

In the WINONA, MINNESOTA sales territory it's ROBB BROS. STORE for BEE-KEEPERS SUPPLIES. Wooden ware—Foundation—Containers. Robb Bros. Store, Winona, Minnesota.

We CARRY a full line of Root quality bee supplies. Prairie View Honey Co., 12303 Twelfth Street, Detroit 6, Michigan.

YOUR WAX WORKED into high quality medium brood foundation, 22c pound; 100 pounds, \$18.00. Also medium brood foundation for sale at 75c pound. Fred Peterson, Alden, Iowa.

CLEAN UP AFB with sulfa. 25 tablets 50c; 50, \$1.00; 100, \$1.50; 1,000, \$6.00. Free Circular, quick shipment. WALTER T. KELLEY CO., PADUCAH, KENTUCKY.

FOR SALE—25,000 mill run Lewis sections 3"x5x1" scalloped 4 sides 1/4 inch at \$14.00 per thousand, f.o.b. Hamilton, Illinois. Dadant & Sons, Hamilton, Illinois.

HIVE BODIES, covers and bottom boards, bee shipping cages and nuclei hives. All supplies new and knocked down. Price list furnished on request. A & B Supply Company, Coffee Springs, Alabama.

(Please turn to page 213)

## HONEY WANTED

Carloads and less than carloads. Mail sample and best prices in all grades.

C. W. AEPPLER COMPANY  
Oconomowoc, Wisconsin

## HONEY LABELS

Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.

C. W. AEPPLER COMPANY  
Oconomowoc, Wisconsin

## ITALIAN BEES AND QUEENS

We have increased our number of colonies of bees and queen yard 125%. We solicit large package and queen orders.

	1 to 9	10 to 99	100 and above
2-lb. package with queen (each)	\$4.25	\$4.10	\$4.00
3-lb. package with queen (each)	5.35	5.20	5.00
Queen (each)	1.30	1.25	1.20

Small orders cash, large orders 20% deposit.  
Health certificate with each order.

**MITCHELL'S APIARIES**

Box 391

**BUNKIE, LOUISIANA**

## NORTHERN CALIFORNIA Package Bees & Queens

2-lb. pkg. with queen	\$4.50
3-lb. pkg. with queen	5.70

10% for orders under 25 packages.

Accepting orders by telegram  
throughout April

**CLIFF THOMAS**

COTTONWOOD, CALIFORNIA  
(Formerly R. E. LaBarre Apiaries)

## BOOKED TO CAPACITY

Sorry, we cannot accept any more orders for package bees this coming season. Can still take orders for queens, delivery after May 10th, price \$1.25 each.

*Thank you one and all.*

**JOHN S. SHACKELFORD : : Live Oak, Calif.**

## HONEYFLOW BEE FEEDER

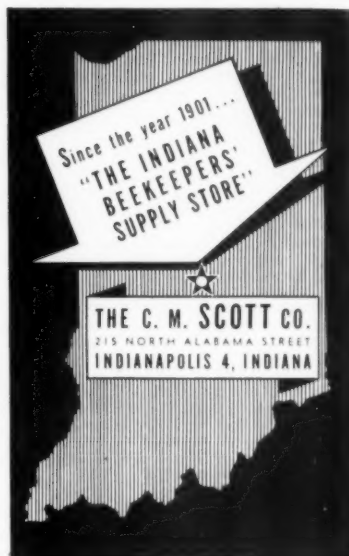


Fits in any standard hive like a frame. Holds 12 lbs. of syrup and fills from side of hive by sliding lid over without uncovering colony. Feed always available; bees can't drown in it. Feeds in brood nest and holds colony heat. Ideal for sulfa feeding. Builds packages rapidly.

Price \$2.00, plus postage; add 4c tax on Iowa orders. F. O. B. Knoxville. Shipping weight 3 lbs. Write for quantity prices and detailed information.

A trial will convince you

**W. O. GOEBEL : Knoxville, Iowa**



## Queens BEES Queens

Choice, young fertile Italian queens available on short notice. Your choice of golden or dark three-banded, clipped if desired at \$1.10. Package bees 2-lb. \$4.00. Trade queens for supplies.

**Neal's Apiaries**  
HAMBURG, LOUISIANA

Every mail brings in more and more orders for

## "Silverhide" Ready-mixed Aluminum Paint

from beekeepers, located all over the U. S. A. They have found that it really keeps their hives from 10 to 15 degrees cooler in the summer and 10 to 15 degrees warmer in the winter. Write for our circular and prices.

**TUNG OIL PAINT MFG. CO., Inc.**  
BOX 83 ORANGEBURGH, N. Y.

## GLEANINGS IN BEE CULTURE

FEATURE ARTICLES—NEWS ITEMS  
MONTHLY TALKS TO BEEKEEPERS

Subscription Rate

1 year, \$2.00; 2 years, \$3.00; 3 years, \$4.00  
in United States and Canada.

**THE A. I. ROOT CO.**  
MEDINA, OHIO

## HOLDER APIARIES



*In the mild climate of the Deep South*

**Genuine 3-Banded Italian Queens and Package Bees**

QUALITY, SERVICE, SATISFACTION, DEPENDABILITY

	Queen	2-lb. Pkg.	3-lb Pkg.	4-lb. Pkg.	5-lb. Pkg.
1-24	\$1.40	\$4.50	\$5.85	\$7.20	\$8.55
25-99	1.30	4.25	5.55	6.85	8.15
100-up	1.20	4.00	5.25	6.50	7.75

**HOLDER APIARIES : Leroy, Alabama**

**Lest you forget the good  
rule to go by—**

**BUY YOUR BEES AND QUEENS  
FROM ALABAMA, APIARIES.**

Uriah, Alabama

	Queens	2-lb.	3-lb.
1-24	\$1.40	\$4.50	\$5.85
25-99	1.30	4.25	5.55
100-up	1.20	4.00	5.25

Twenty-five years continued service.  
OUR AIM once a customer always a customer.

**Alabama Apiaries**

URIAH, ALABAMA

### Why not try HIVE WARMING?

It is making money for good managers. How? By early Spring Build-up and Prevention of Chilled Brood.

Users of the Bee-Lyon Warmers are enthusiastic. The Bee-Lyon follows the proven Starnes System. Installation without unsealing hive. Low price per hive. Automatic temperature control.

Send today for  
**FREE LITERATURE**

**LYON RURAL ELECTRIC CO.**

Dept. BJ,  
SAN DIEGO, (12) CALIF.

### 1911 DUPUIS 1948 Package Bees and Queens

We solicit large and small orders.  
**THREE-BANDED ITALIANS**

95% Baby Bees and 5% Teachers  
at following prices

2-lb. package with queen	\$4.50
3-lb. package with queen	5.85
4-lb. package with queen	7.20
5-lb. package with queen	8.50

Extra queens \$1.50.  
Queenless bees \$1.50 per lb.

**DUPUIS APIARIES**

BREAUX BRIDGE, LA.

### MAKE YOUR OWN COMPOST

in a pre-fabricated Willow Grove Com-  
post Box manufactured by the

**Willow Grove Earthworm  
Hatchery**

WILLOW GROVE, PA.

Send 35c for instructive booklet  
"Compost and How to Make It," also  
free literature on earthworms and soil  
improvement. Price of compost box  
\$18.75, F. O. B., Willow Grove.

*Profit by reading A-B-J Ads*

# QUEENS

**Caucasians Only**

We do not waste time on races of bees that have proven to be inferior in our honey producing apiaries in Nevada and California.

Neither do we waste time on what we consider to be inferior methods of queen production. We use standard 3-frame nuclei only; no baby or other midget nuclei designed for mass production.

We produce for **QUALITY ONLY**, and you get the same quality that is consistently producing us larger crops of honey in both California and Nevada, and will do the same for us in Alberta this year, we are sure.

Buy your queens from a honey producer who knows what it takes in quality to produce a crop of honey.

Prices are \$1.50 each; 5% discount on 50 queens; 10% discount on 100 queens or more.

**THOS. S. DAVIS**

**RT. 7, BOX 3914  
Sacramento, Calif.**

### Packages

**SUNKIST  
ITALIAN**

### Queens

We have openings May 10th on for packages and queens. Satisfaction guaranteed. Send us your inquiries. On shipments for May 25 and afterwards deduct 15% on packages and 25% on queens.

2-lb. with queen	1-25	25-up
3-lb. with queen	\$4.25	\$4.00
Queens	5.25	5.00
	1.25	1.15

**SUNKIST BEE COMPANY : Convent, La. : Tel. 101-W**

*After May 10 we offer*

**Italian Queens  
Booster Packages  
Packages with Queens  
In any quantity**

**AFTER MAY 20**

**Italian Queens . . 90c Each**

**GEO. A. HUMMER & SONS**

ESTABLISHED 1892

PRAIRIE POINT, MISS.

Wire or phone Macon, Miss.

### QUALITY QUEENS OUR SPECIALTY

**THREE-BANDED ITALIANS ITALIANS MATED TO CAUCASIAN  
DRONES AND PURE CAUCASIANS**

QUEENS, each	1-24	25-49	50-100
	\$1.40	\$1.30	\$1.20

Vigorous young laying queens. Gentle, prolific and heavy honey producers. Postage prepaid. Health certificate furnished with every shipment, and **LIVE DELIVERY GUARANTEED**. To obtain choice shipping dates, order promptly.

**PINE BLUFF BEE FARMS : Rt. 3 : Pine Bluff, Ark.**



# Garon's Package Bees and Queens

## Three-Banded Italian Stock of Superlative Quality

Bred for Heavy Honey Production, Moderate Temper and Other Desirable Characteristics.

PRICES	2-lb. with queen	3-lb. with queen	4-lb. with queen	Queens	PRICES after MAY 20TH	2-lb. with queen	3-lb. with queen	4-lb. with queen	Queens
1- 9	\$4.40	\$5.55	\$6.70	\$1.35	1- 9	\$4.00	\$5.00	\$6.20	\$1.10
10-24	4.25	5.35	6.50	1.30	10-24	3.85	4.85	6.00	1.05
25-99	4.15	5.25	6.40	1.25	25-99	3.75	4.75	5.90	1.00
100-up	4.00	5.15	6.30	1.20	100-up	3.60	4.70	5.80	.99

For queenless packages, deduct the price of the queen. For our Disease Resistant Queens please turn to page 171 of this magazine. Health certificate on all shipments. Full weight packages—Light containers—Prompt shipment.

GARON BEE COMPANY : DONALDSONVILLE, LA.

# Package Bees with Queens

## ITALIANS

### PRICES—WITH QUANTITY DISCOUNTS

	1 to 9	10 to 99	100 and above
2-lb. package with queen (each)	\$4.25	\$4.10	\$4.00
3-lb. package with queen (each)	5.25	5.10	4.90
Queens (each)	1.30		

Small orders cash, large orders 20% deposit. Balance in 10 days before shipping date.

Many desirable shipping dates still open. BE WISE AND ORDER NOW.

# Sunshine Apiaries

BEEs MAKE OUR LIVING.

LET OUR BEEs MAKE YOUR LIVING.

Box 471, Phone 209-R

Woodville, Miss.

# HONEY GIRL APIARIES

## Package BEEs and QUEENS When You Want Them

### ITALIAN BEEs AND QUEENS

	1 to 9	10 to 49	50 to 99	100 and above
2-lb. package with queen—(each)	\$4.50	\$4.25	\$4.15	\$4.00
3-lb. package with queen—(each)	5.65	5.40	5.30	5.15
4-lb. package with queen—(each)	6.80	6.55	6.45	6.30

Extra queen, untested, \$1.35, any quantity—Tested, \$2.00, any quantity

W. E. CASE, Proprietor : Moreauville, Louisiana

## SUPPLIES (Continued from page 209)

**POLLEN SUBSTITUTES**—Soybean Flour (expeller processed), 12-lb. bag, \$1.80; 24-lb. bag, \$2.90; 100-lb. bag, \$9.50. Dried Brewer's Yeast (animal), 1 to 25 lbs., 35c per lb.; 25-lb. bag, \$6.25; 100-lb. bag \$19.50. Please allow for postage if by parcel post. Free instructions for using with your order. **HONEY SALES COMPANY**, 1806-08 NO. WASHINGTON AVE., MINNEAPOLIS 11, MINNESOTA.

**BEEKEEPER'S SUPPLIES**. May we quote you. Simeon B. Beiler, Intercourse, Penn.

**SIMPLEX TRAP** clips queens without handling. \$1.75 postpaid. **INSTANT FRAME SPACERS**—seven-eight-nine, specify size. \$1.50 postpaid. Free circulars. George Leys, 36 Jackson Street, New Rochelle, N. Y.

**PORTER BEE ESCAPES** are fast, reliable, labor savers. R. & E. C. Porter, Lewis-town, Illinois.

**WRITE FOR CATALOGUE**. Quality bee supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries. Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

## SEEDS AND TREES

14 VARIETIES honey plant seeds. Rare vegetable seeds. Complete line fruit trees, shrubs, roses, gladiolus bulbs, etc. List and sample packet seeds, 10c. Robert Mead, White River Junction, Vermont.

The new selection, Evergreen Sweet Clover, lengthens blooming period of sweet clovers by from four to six weeks. Per pound delivered 50c; 100 lbs. or more, \$35.00 per hundred F. O. B. Enid, Oklahoma. Madrid Sweet Clover, yellow blossom, is also a great clover. Prices on request. W. B. Johnston Downtown Store, Enid, Oklahoma.

TRY the new Pellett Clover. Order root divisions for immediate shipment. See ad page 198. Melvin Pellett, Atlantic, Iowa.

RAISE your own trees and shrubs from seed for shade, windbreak, prevention of soil erosion, snow fence, etc. For prices and information write Woodlot Seed Co., Norway Michigan.

**SEEDS OF HONEY PLANTS—PURPLE LOOSESTRIPE**, good honey plant for wet land, seed per ounce (40,000 seeds) \$1.00; ¼ pound \$3.00; pound \$8.00. **CHAPMAN HONEY PLANT**, easy to grow, ½ pound \$1.00; 3 pounds \$5.00. **ANISE HYSSOP**, blooms from June until frost, ounce \$2.00; ¼ pound \$5.00. **SAINFORN**, per pound \$1.00. One packet each of 12 good honey plants for \$2.00. All postpaid. Circular on request. Melvin Pellett, Atlantic, Iowa.

## MISCELLANEOUS

**INTERESTING, NEW, DIFFERENT, PROFITABLE** magazine for backlotter, suburbanites, part-time farmers. \$2.00 yearly, or sample copy 20c coin. **BACKYARD FARMER**, 223 Bellis Street, Duluth 3, Minn.

**NO NEED OF WAITING** for that favorable weather and right time of day. Because bees are gentle and work easily any time with our practical work tent. Write R. W. McWethy, Route No. 1, Dixon, Ill.

**AT LONG LAST!** May 10, through 15, 1948, six full-day course in beekeeping in the apiary by the South's leading authorities on Swarm Control; Queen Rearing; Queen Introduction; Package Bee Installation; Hive Manipulation; Honey Grading and Packing; Making Increase; Disease Diagnosis and Control; Moving Pictures each night on Practical Beekeeping in the South. For full information address L. C. Dotson, 207 Haas-Howell Bldg., Atlanta, Georgia.

**POEMS WANTED** for musical setting. Send poems for immediate consideration. Hamann Service, 660 Manhattan Building, Milwaukee, Wisconsin.

**RANCH MAGAZINE**—Do you find it difficult to secure information about sheep and sheep ranching methods? The **SHEEP AND GOAT RAISER** reaches more sheepmen with more information on range sheep than any magazine published. Subscription \$1.50. Hotel Cactus, San Angelo, Texas.

**THE BEE WORLD**—The leading bee journal in Great Britain and the only international bee review in existence. Specialize in the world's news in both science and practice

of apiculture. Specimen copy, post free, 12 cents, stamps. Membership of the Club, including subscription to the paper 10/6. The Apis Club, The Way's End, Foxton, England.

**INDIAN BEE JOURNAL**—The only Bee Journal of India. Sample copy against 25 cents (or 1s 6d.) postage stamps. Yearly 7s. 6d. (\$1.50) International M. O. Apply—Bhupen Apiaries (Himalayas, Ramparh, Dist. Nainital, U. P., India.

## QUEENS-Packages 3-Banded Italians



RUSH ORDERS FILLED BY WESTERN UNION ONLY

PRICES AS FOLLOWS

2-lb. and young laying queen (each) \$4.25

3-lb. and young laying queen (each) 5.25

Queens, (Postpaid) 1-25 \$1.25; 26-up \$1.15

Queenless packages, subtract price of queen.

Efficient—Rapid—Honest Service.

**CELLS HONEY & BEE CO. : : Houma, La., U.S.A.**

"In the Sunny South"

## DIXIELAND'S LEATHER COLORED ITALIANS

PACKAGE BEES AND QUEENS

Booking dates open in April and May

	Queens	2-lb. Pkg.	3-lb. Pkg.	4-lb. Pkg.
1-24	\$1.40	\$4.50	\$5.85	\$7.20
25-99	1.30	4.25	5.55	6.85
100-up	1.20	4.00	5.25	6.50

**DIXIELAND APIARIES : GREENVILLE, ALA.**

## New Quotation

	QUEENS	2-lb.	3 lb.	4 lb.	5 lb.
1 to 24	\$1.40	\$4.25	\$5.65	\$6.95	\$8.30
25 to 99	1.30	4.00	5.30	6.65	7.90
100 Up	1.20	3.75	5.00	6.25	7.50

For queenless packages deduct price of queen. For quality queens and prompt service try us. 15 years' experience. 25 per cent deposit required with order, balance before shipment is made.

**B. A. ANDERSON & CO.**  
OPP, ALABAMA

## Are You Losing Beeswax?

We render old combs, cappings, and slumgum for beekeepers. Our steam wax presses get every available ounce of wax out of this material. Send for terms. Ship us your beeswax. **DADANT & SONS, Hamilton, Ill.**

## Yellow Italian Bees & Queens

We still have a few open dates for this and next month, so hurry and send us your need NOW. Live delivery guaranteed. Health certificate with each shipment.

2-lb. with young laying queen		3-lb. with young laying queen	
1 to 24 each	\$4.25	1 to 24 each	\$5.25
25 to 49 each	4.15	25 to 49 each	5.15
50 on up each	4.00	50 on up each	5.00

Queens untested, May delivery each \$1.25. 50 or more \$1.10 each, Postpaid.

**PLAUCHE BEE FARM : HAMBURG, LA.**

## ATTENTION, HONEY PRODUCERS

We can still supply your needs for quality packages and a good, young laying queen, at the time you want them. Our 100% droneless packages of young bees and a young queen raised right is making repeat customers from year to year.

Either Italian or Caucasian queens, bred to Italian drones.

PRICES AFTER MAY 20		1-24	25-99	100 up
2-lb. with queen	\$4.00	\$4.00	\$3.75	\$3.50
3-lb. with queen	5.00	5.00	4.75	4.50
4-lb. with queen	6.00	6.00	5.75	5.50
Queens	1.10	1.00	1.00	.90

Queens postpaid, clipped or airmailed at no extra cost.

**THE VILLAGE BEEKEEPER : Pineville, La.**

## FOREHAND'S Italian Package Bees and Queens

GOOD BEES AND GOOD QUEENS MEAN MORE HONEY

2-lb. package with queen any number	\$4.00
3-lb. package with queen any number	5.00
Italian queens any number	1.00

For larger packages add \$1.10 per pound.

It will pay you to write us for prices after May 20

For queenless packages deduct the price of our queens.

**HUBER FOREHAND : Satsuma, Ala.**

Phone No. 35079

Telegraph Office

44 Years Among the Bees

## Three-Band Italian Package Bees

Full weight, prompt shipment, young bees. State Health Certificate with each shipment. Live arrival guaranteed. Replacement or refund made promptly upon Receipt of Bad Order from your Express Agent.

PRICES FOR 1948

With Young Laying Queens

Lots of	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1 to 29	\$4.25	\$5.40	\$6.55	\$7.70
30 or more	4.00	5.00	6.00	7.00

If queenless packages are wanted, deduct \$1.25 each from above prices. 5% discount on 100 or more packages.

**JACKSON APIARIES**  
FUNSTON, GEORGIA

## California Package Bees

FROM APIARIES FREE OF  
A. F. B. OR NOSEMA.

2-lbs., \$4.50 — 3-lbs., \$5.50

Italian or Caucasian Queens.

20% deposit books order.

**L. E. HALSTEAD APIARIES**  
Rt. 11, Box 890, Fresno, Calif.

## G. B. Lewis Wooden Goods!

Dadant's famous crimp wired foundation. Catalogue on request. Productive Italian package bees and queens, April and May. No deposit required.

**Dotson's Apiaries**

3059 W. Roxboro Rd., N. E., Atlanta Ga.

## Italian Package Bees and Queens

	1-24	25-49	50-up
2-lbs. bees with queen	\$4.25	\$4.05	\$3.95
3-lbs. bees with queen	5.25	5.05	4.90
4-lbs. bees with queen	6.35	6.15	6.00
Queens	1.25	1.20	1.10

We guarantee you live delivery, satisfaction, and a health certificate with each order. A 10% deposit books your order, balance 10 days before shipping date.

**OSCAR ARNOUVILLE**

BOX 35

HAMBURG, LOUISIANA

## Italian Bees and Queens

2-lb. pkg. with queen \$4.00; 3-lb. pkg. with queen \$5.00; Queens \$1.15. We guarantee safe arrival and satisfaction. 10% books your order, balance 10 days before shipping. Health certificate with each shipment.

**BAYOU BEE CO.**

RT. 1, BOX 49, MONTEGUT, LOUISIANA

THE JOHN M. DAVIS STRAIN

## ITALIAN QUEENS

Bred the Davis way. Just a few dates left open for May delivery. These queens are bred for Production, Gentleness and Disease Resistance.

April 15th to June 30th \$1.25 each.

Write for discount on large orders. 1/3 books order, balance ten days before shipping.

**LITTLES APIARIES**

P. O. BOX 122, SHELBYVILLE TENN.

LEATHER COLORED

## Italian Queens—Package Bees

We are booked up for queen orders for April and May, but have some open dates for 3-lb. packages for April or May delivery at \$5.60. Discount on 25 packages or more.

**HUMPHREY BEE FARM**  
MOUNT VERNON, GEORGIA



# Italian Package Bees & Queens for 1948

Health Certificate - Prompt Shipment  
Live Delivery Guaranteed

**B. J. BORDELON APIARIES: Moreauville, La.**

5% discount on order of 5 packages or more and 10% discount on orders after May 20th.

2-lb. package with queens	\$4.00
3-lb. package with queens	5.00
4-lb. package with queens	6.00
5-lb. package with queens	7.00
Queens	1.25

## TANQUARY'S ITALIAN BEES AND QUEENS

Our 6,000 colonies and 14,000 nuclei were never in better shape. This means we can ship you good package bees and queens. TANQUARY bees and queens for good crops—they do the job for you.

Quantity	1-5	6-49	50-99	100-up
2-lb. packages bees with queens	\$4.50	\$4.35	\$4.20	\$4.00
3-lb. packages bees with queens	5.65	5.50	5.25	5.00
4-lb. packages bees with queens	6.75	6.50	6.25	6.00
5-lb. packages bees with queens	7.75	7.50	7.25	7.00
Queens (Postpaid)	1.35	1.30	1.25	1.20

Tested queens (Postpaid) any number \$2.00

Queenless packages, deduct price of queen.

Queens clipped at no extra cost.

\$1.00 per package books your order, balance ten days before shipment is made. We are booking orders fast. All bees shipped in new cages. Health certificate with each shipment. Safe arrival guaranteed.

BEE WISE—ORDER EARLY

**TANQUARY HONEY FARMS, Inc.**

LENA, SOUTH CAROLINA

## PACKAGE BEES with Queens

MAY WE RESERVE THE DATE YOU DESIRE FOR YOUR SHIPMENT?

### ITALIANS

	PRICES			
	1-9	10-49	50-99	100 & above
2-lb. pkg. with queen (each)	\$4.50	\$4.25	\$4.15	\$4.00
3-lb. pkg. with queen (each)	5.65	5.40	5.30	5.15
4-lb. pkg. with queen (each)	6.80	6.55	6.45	6.30
Queens (each)	\$1.35. Tested \$2.00.			

WE SERVE TO SERVE AGAIN

**SUNNY SOUTH APIARIES**

MARKSVILLE, LA.

I. CLARK, Prop.

# Advertise in the American Bee Journal

# PACKAGE Bees For 1948

## Send order today for THE OLD RELIABLE Puett's Packages and Queens

We have not increased prices since 1946

All orders for more than two packages SHOULD BE FOR MULTIPLES OF THREE, to make even crates.  
All orders should be accompanied by payment of \$1.00 PER PACKAGE, to confirm and hold shipping date, balance payable before shipping.

PRICES—Quantity Scale:	1 to 9	12 to 48	51 to 99	102 & Above
2-lb. Package with Queen	ea. \$4.50	ea. \$4.25	ea. \$4.15	ea. \$4.00
3-lb. Package with Queen	ea. 5.65	ea. 5.40	ea. 5.30	ea. 5.15
4-lb. Package with Queen	ea. 6.80	ea. 6.55	ea. 6.45	ea. 6.30
Extra Queen, Untested, \$1.25, any quantity—Tested, \$2.00, any quantity.				
For queenless packages deduct \$1.25. Loose-Queen type (late shipment only) add \$1.00.				
500 NEW COLONIES FOR 1948 PACKAGE PRODUCTION				

ORDER TODAY—DON'T WAIT.

**THE PUETT COMPANY : Hahira, Georgia**

Our shipping season usually starts the last days of March. Prior to that we book only approximately fifty per cent of average capacity. With average production we will be accepting more orders daily throughout the shipping season.

For some years we have been promising our patrons that we would attempt to produce more queens. Our goal incidentally was to produce twice as many queens as package bees. This year that goal has been attained. The reason of the delay was a shortage of skilled labor or men to train into the work. At the present time this shortage has been overcome. Most of our patrons who buy package bees desire to purchase a few extra queens and at times we have had to refuse this accommodation. Now, you may order these extra queens and there will also be some for straight queen orders.

1948-1947 PRICES					
Lot	Queens	2-lb.	3-lb.	4-lb.	5-lb.
1-5	\$1.55	\$4.75	\$6.00	\$7.25	\$8.50
5-15	1.50	4.65	5.90	7.15	8.40
15-25	1.40	4.50	5.75	7.00	8.25
25-up	1.35	4.40	5.65	6.90	8.15

Above package prices include queen. Queenless packages, subtract \$1.35 from price of package with queen. All queens are airmail, postpaid, but package bees are F. O. B. shipping point and are shipped Express collect. It is preferable to ship package bees by railway Express, however, they can be mailed and in that event, customer should include postage.

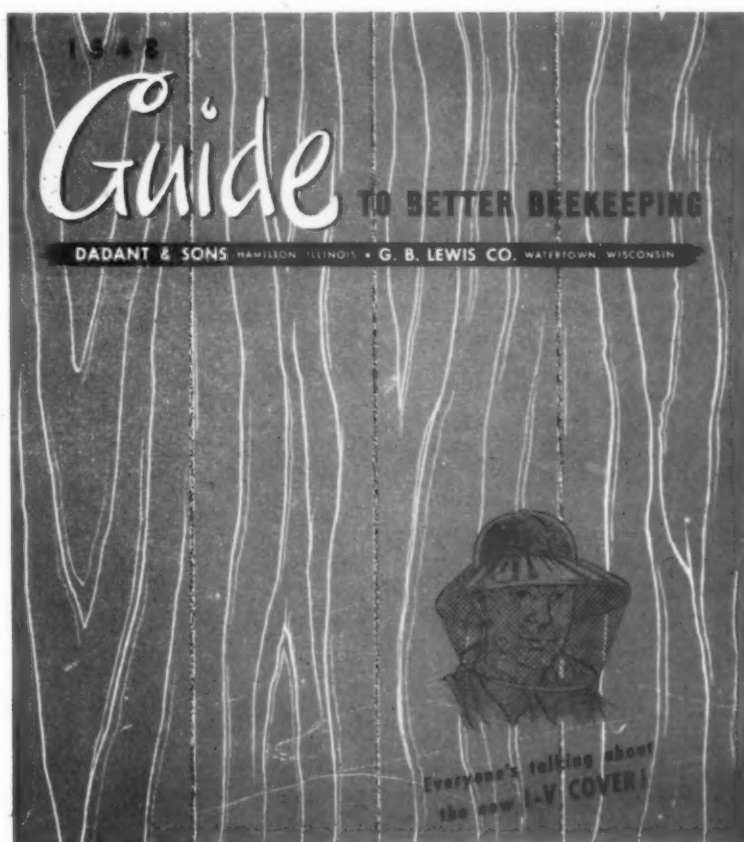
TERMS: Small orders, cash in full. Large orders, 20 per cent deposit, balance to be received two weeks before shipping date. U. S. funds. A 10 per cent discount is allowed on package bees if shipment is to be made after May 20th. A 20 per cent discount is allowed on queens if shipment is to be made after May 20th and a 30 per cent discount is allowed on queens to be shipped after June 1st.

ONE OF THE WORLD'S LEADING STRAINS OF LIGHT COLORED ITALIANS

**THE DANIELS APIARIES**  
**PICAYUNE, MISSISSIPPI**

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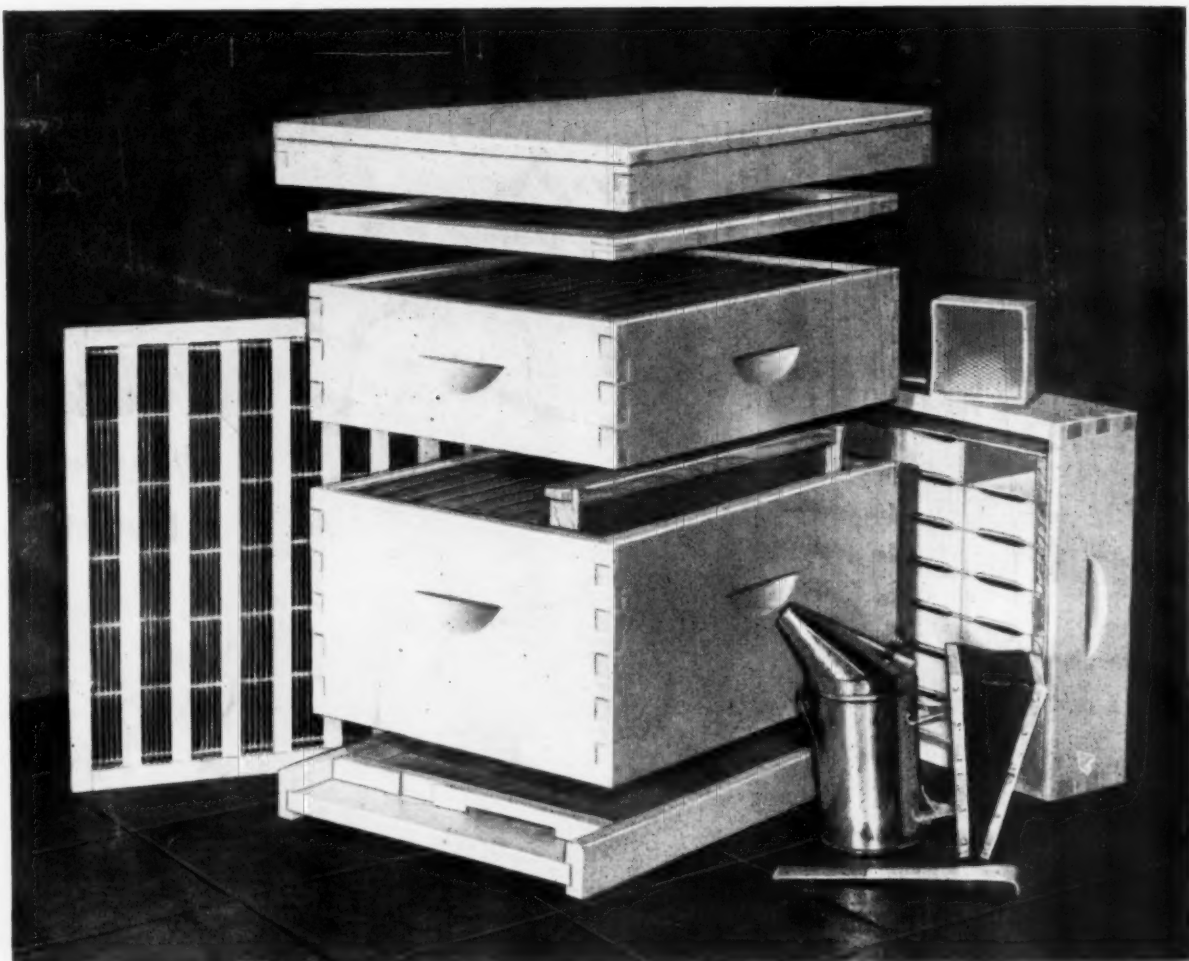
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